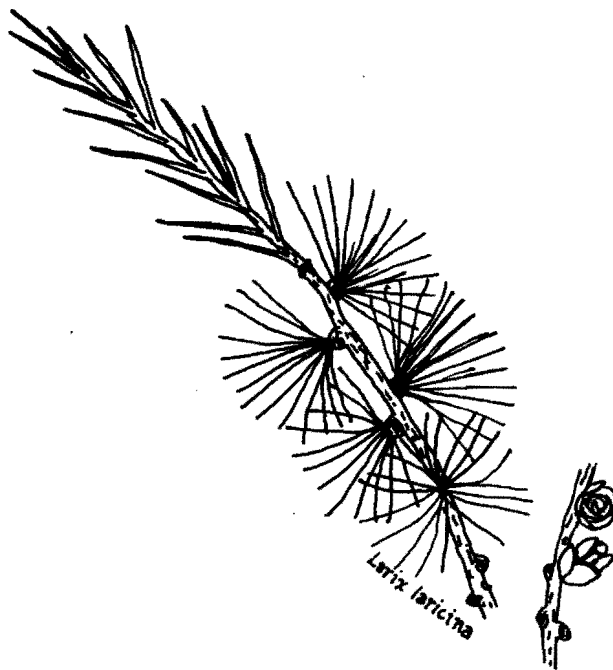


Gopher Peavey 1991

Gopher Peavey 1991

The Gopher Peavey is the yearbook of the College of Natural Resources, University of Minnesota.

Published yearly since 1922.



Printed on 100% recycled paper

TABLE OF CONTENTS

Dedication	
Professor Gordon W. Gullion.....	1
Dean's Report	
Richard A. Skok.....	2
Department Reports	
Alan R. Ek.....	4
James R. Kitts.....	6
James L. Bowyer.....	8
Dedication of the Natural Resources-	
Administration Building and Green Hall Addition.....	10
University of Minnesota Outstanding Achievement Award.....	12
Faculty	
Forest Resources.....	15
Cloquet Forestry Center.....	24
Fisheries and Wildlife.....	25
Forest Products.....	28
Staff.....	34
Graduating Seniors.....	41
Essay: Superior Equinox.....	50
Alumni Spotlight	
William Morrissey.....	52
Sponsor Spotlight	
Rajala Companies.....	54
Natural Resources and Environmental Studies:	
A New Major For a New Age.....	55
Field Sessions	
Cloquet Session, Fall 1990.....	56
Itasca Session: One Student's Perspective.....	58
Summer Job Experience	
Owls, Old Growth, and Controversy.....	59
A Year With the Forestry Club.....	60
Forestry Club Conclave 1990.....	62
The Environmental Studies Club.....	63
A Year in the Life of the Fisheries and Wildlife Club.....	64
Recreation Resource Management Club.....	66
PIMA - TAPPI, Student Chapter.....	67
Christmas Tree Sales; Respect for the Gibbs School House.....	68
The Student/Faculty Board.....	69
Saint Paul Board of Governors.....	70
Who Says Student Activism is Dead?.....	71
Scholarships.....	72
Gopher Peavey Staff Credits.....	81
Advertisers.....	83



**DEDICATION:
PROFESSOR
GORDON W.
GULLION**

It was quite by accident that Gordon Gullion happened upon his first major discovery on the grouse enigma. On a January evening in 1963 just after sunset, Gordon spotted several ruffed grouse in the high branches of an aspen tree. To the average person this might have been a simple bird-watching scene, but to this young grouse researcher it was a breakthrough. Gullion watched the birds for a

short while and realized that they were quite particular about which buds they chose. This observation, and others that followed, linked the ruffed grouse to the aspen forest and secured research funding for Gullion and many others in the field.

This 1963 discovery came after Gordon Gullion had been with the University of Minnesota for five years. Gordon, a native of Oregon, had been working in wildlife management in Nevada for seven years when he joined the University and began research at the Cloquet Forestry Station. The work he did there earned him much recognition from the Minnesota Department of Natural Resources, the Ruffed Grouse Society, and the College of Natural Resources where he later became a professor in wildlife management. "Mr. Ruffed Grouse Society," as he has been called, even served on the Ruffed Grouse Society Board of Directors from 1972 until early 1990. Gordon Gullion is considered the foremost expert on ruffed grouse and their links to aspen forest stands. In addition, he has written many articles, booklets, and a book for the popular market entitled Grouse On the North Shore.

Gordon Gullion, however, does not see his job with the ruffed grouse as over. He is currently working on a scientific text on the game species. Gullion worries that he may never see his text finished. In winter 1989-1990, Gordon Gullion was diagnosed with cancer. It has been a long, hard battle. But between chemotherapy treatments, when he's feeling up to it, Gordon Gullion goes to his "lab," the aspen forests of the Cloquet Station, and continues work on his life-long project: the understanding of the ruffed grouse.

After three decades of research, Gullion has been presented with the Department of Natural Resources' "Meritorious Service Award" and the Minnesota Forestry Association's recognition and award for "excellence in wildlife management." It is with great pride that we, the staff of the 1990-1991 issue of the GOPHER PEAVEY, dedicate this issue to Gordon Gullion and the work he has done. It is with respect that we continue to study his research on ruffed grouse and wildlife management. It is our hope that through his battles he still finds peace. Gordon Gullion is in our prayers.

by: Elizabeth Jones



DEAN'S REPORT

The past year has been one largely of consolidating recent developments and gains for the College of Natural Resources (CNR). We are well settled in remodeled Green Hall and the new Natural Resources Administration Building. Basic budgets remain tight requiring creative approaches and temporary funding sources to help us address the growing and changing needs of our natural resource programs and clientele.

Undergraduate enrollment for fall quarter 1990 stood at 437 students in the College of Natural Resources (CNR), a 30% increase over the previous fall. The increase was largely the result of new students enrolled in the recently established Natural Resources and Environmental Studies program. Enrollments by curriculum are shown in the table.

Richard A.
Skok

Curriculum	Enrollment Fall 1990	Degrees Granted 1990¹
Forest Products	71	14 (02)
Fisheries and Wildlife	118	14 (13)
Forest Resources	76	7 (16)
Recreation Resource Mang.	32	3
Urban Forestry	13	5
Natural Resources and Environmental Studies	97	1
Undecided	12	n.a.
Adult Specials	18	n.a.
<u>Totals</u>	<u>437</u>	<u>44 (31)</u>

n.a.-not applicable

() -advanced degrees;

degrees reported are for 1990 academic year

We have also experienced a surge in winter quarter enrollment with a total of 473 undergraduates. This is the first time in more than 10 years that winter enrollment in our programs has exceeded that of fall term.

The University has embarked on a major program of internal funding reallocation. This is designed to accomplish several objectives, one of which is excellence in undergraduate education. This effort recognizes that new program funds from state sources are and will continue to be extremely limited for higher education in Minnesota. Change will have to be brought about by setting tough priorities and targeting internal resources to achieve these. For the first time in the nearly 17 years I have been dean, the University will not request new program funds from the legislature for the coming biennium.

In keeping with this funding situation, each collegiate unit was asked to identify 10% of its state funding for reallocation over the next three to five years. This amounted to \$386,000 of state teaching and research funds in the current CNR budget. These funds were either to be used elsewhere in the University or we were to be permitted to keep part or all of them. However, they were to be used for internal reallocation among our programs on a prearranged plan. Thus, we were asked to indicate a plan showing how we would utilize the funding for such reallocation within the college over

the period of 1991-1996. A plan was developed in consultation with departments and submitted for central consideration.

After review by central administration, the decision has been made (at least as of the date of this writing) that we will be permitted to keep the 10% of our funding that was on the table for internal collegiate reallocation. This reallocation plan rests entirely on the assumption that there will be no further college level funding reductions such as those that have occurred over the past two years. The validity of this assumption still must await action in the current legislative session and the impact of the new governor's budget recommendations (which have still not been announced). It will be late spring before the fiscal realities become clear. At least for now, it appears that we will hold the funding we presently have.

We are excited about the new alumni award being established for outstanding contributions to undergraduate education. I think this is a very appropriate and meaningful step by the Natural Resources Alumni Society. Our thanks to President Don Meyer, Anita Twaroski, and Phil Splett, who have been spearheading this effort. Alumni are an excellent source of judgement on such contributions. The first of these biennial awards will be made in May 1991.

In August, I had the privilege of presenting Mr. Chin-Chao Koh ('64), master of science in forestry, graduate of the University of Minnesota, with the University's Outstanding Achievement Award. Mr. Koh's career in Taiwan saw him progress through a series of positions with increasing responsibilities in the Joint Commission on Rural Rehabilitation. Among his accomplishments during this phase of his career were responsibility for development of the first island-wide inventory and early leadership in the protection of slopelands on the island of Taiwan. From 1979 to 1984, Mr. Koh was secretary general of the Council for Agricultural Planning and Development. He next served as vice chair of the Council of Agriculture from 1984-1989, and as chair of the Committee on International Technical Cooperation for the Republic of China (ROC). During these assignments he led in updating the laws on forestry, wildlife conservation, and slopeland conservation. He also served as ROC's chief delegate in international trade negotiations for agricultural products. Mr. Koh currently is president and chairs the board of directors of the Taiwan Sugar Company.

We have received nearly \$300,000 of remodeling and building funds to improve the classroom and commons facilities at the Cloquet Forestry Center. The Center has become an active continuing education location for natural resource professionals, Minnesota Extension Service programs, and other organizations with natural resource interests. Recently a satellite receiver for downlinking of telecommunications was provided at the Center through the Minnesota Extension Service. Scott Reed, who has served as Center coordinator the last several years, was instrumental in both of these accomplishments. Unfortunately, Scott was lured to a position as assistant dean for forestry extension at Oregon State University in late fall. We were fortunate to have Bob Stine assume the coordinator's responsibilities at the Center on an interim basis.

More detail on programs and people in the college will be found in the departmental reports elsewhere in the 1991 Peavey. There is also a special article in this issue on the college's building dedication held this past October.

I want to recognize and thank Jim Kitts for serving as interim department head in the Department of Fisheries and Wildlife while Ira Adelman was on sabbatical this past year.

Your support as alumni and friends of the College of Natural Resources has been essential to the progress we have made in recent months and years. It is one of the most reassuring aspects for current faculty, staff, and students during periods when difficult choices are being made in and about the University. We are highly appreciative and aware of this important partnership we have with you.



DEPARTMENT OF FOREST RESOURCES 1990 IN REVIEW

The past year has been an exciting and challenging one for faculty and students in Green Hall. We are pleased to be back in Green Hall and are enjoying its new and remodeled capability. Convenient access to the library and college computer center have become real assets. The building process has taken many years, and we want to thank those who have been heavily involved in bringing it to fruition. Within the department special thanks go to Ed Sucoff, Ken Brooks, and Janelle Schnadt. However, I would like to give a collective thanks to everyone who has helped.

Of special note is that Janelle Schnadt was nominated and selected as one of three recipients of the 1990 College of Natural Resources Civil Service Outstanding Achievement Award. Congratulations!

Alan R. Ek Janelle's role as departmental associate administrator was especially helpful in bringing us through the difficult remodeling and moving process. Mary Ann Hellman in Forestry Extension was promoted to principal secretary, and Marcia Ritterling was promoted to accounts specialist.

Department
Head

We are also pleased to see that former faculty member and alumnus Rod Sando has been selected as the new commissioner of the Minnesota Department of Natural Resources. Rod was the banquet speaker at the recent Foresters' Day celebration. Jack Rajala, owner of the Rajala Lumber Company was presented the Forester of the Year award there.

We have a number of new people in the department. Dorothy Anderson, who joined us as an assistant professor in recreation resource management last spring, has been heavily involved in developing the new problem solving courses in the natural resources and environmental studies curriculum. Kathryn Louis joined us recently as a research associate in the tissue culture area. Kathryn recently received a Ph.D. in horticulture. She has collaborated with genetics faculty for several years. Steve Lime, recent master's degree graduate in geographic information systems, has joined the remote sensing laboratory to assist with the NASA-sponsored forest inventory research project. Sean Ahearn, in remote sensing, has left to become a faculty member at Hunter College in New York City. Last fall Scott Reed, associate professor and coordinator at the Cloquet Forestry Center, left to become the assistant dean for forestry extension at Oregon State University. Scott will be sorely missed for his active and dedicated service to the department and extension audiences in northern Minnesota. Bob Stine is serving as acting coordinator until Scott's position is filled.

Other staff changes include the addition of Barry Goldfarb as a new research associate in the area of genetics and molecular biology and Jerrilyn LaVarre Thompson, research specialist assisting Dave Lime in the operation of the National Park Service Cooperative Park Studies Unit. Andrea Weiland will be leaving as secretary in the Remote Sensing Laboratory soon to take a new position in the School of Public Health. We also welcome two new adjunct faculty; Dr. George Honadle, natural resource analyst, and Dr. Michael Phillips, pesticide and forest soils program supervisor with the Minnesota DNR Division of Forestry. Dr. Henry Webster has also joined us as research associate last July to lead the comprehensive Lakes States forest resource assessment project. Hank was formerly the state forester for Michigan.

The F. D. Hubachek, Sr, Land Grant Chair in Forest Ecology has been filled by Dr. Peter B. Reich of the University of Wisconsin. We expect Dr. Reich to arrive in the summer and bring a very active research and graduate program in forest ecology and ecophysiology to Minnesota. Dr. Reich has a Ph.D. from Cornell in environmental biol-

ogy and plant ecology, an M.S. from the University of Missouri in forest ecology, and a B.A. from Goddard College in Vermont in creative writing and physics. He recently received a Presidential Young Investigator Award through the National Science Foundation.

The Aspen/Larch Genetics Project and Cooperative at Grand Rapids is also progressing well. Dr. Bailian Li recently joined the project as a research associate in forest genetics. Bailian has a Ph.D. from North Carolina State University and recently completed his post-doctoral appointment with the Weyerhaeuser Company. He is joining the project just as its new greenhouse/laboratory facility is being completed. We expect his addition to strengthen linkages to campus and regional genetics research.

Enrollment is up, particularly in the new natural resources and environmental studies major. Departmental faculty are playing a large role in the instruction and shaping of that curriculum. Enrollment is also up in forest resources and recreation resource management, while urban forestry enrollment has remained stable. We see these changes as indicative of growing student environmental interests. It also reflects society's broader recognition of the importance of the environment and natural resources. That is a trend with very positive implications.

The department submitted a comprehensive self-evaluation report last fall to the Society of American Foresters for accreditation review of the Forest Resources and Urban Forestry curricula. Following review, the SAF extended accreditation for both curricula to 1995. That is significant recognition of these programs.

There are many new issues in natural resources. Among these are global climate change, acid deposition, concern about biological diversity, and in Minnesota the Generic Environmental Impact Statement (GEIS) or study dealing with forest management. Forest resources faculty will likely be heavily involved in the study. Faculty are also moving to develop projects and research dealing with global atmospheric change impacts. They have been involved in a number of ways with acid deposition research and we are developing tools for examining management for biological diversity. The diversity question is highlighted by DNR efforts in Minnesota to establish old growth forest classifications and presumably a level or type of management to help maintain such conditions. These are complex questions that will not have easy solutions. However, we think our research and educational efforts can contribute information and direction that will facilitate progress. Clearly, students are very interested in these lessons.

Faculty are increasingly involved in environmental research. Ed Sucoff participated in developing a report to the Legislature on "Carbon Dioxide budgets in Minnesota and recommendations on reducing net emission with trees." Hans Grøgersen and Al Lundgren have drawn increasing national and international recognition and funding to their Forestry for Sustainable Development Program efforts. Dietmar Rose is leading a Legislative Commission on Minnesota Resources (LCMR) project to assess the impacts of forest roads on timber, wildlife, recreation, and aesthetics. Ed Sucoff, Dave Grigal, and others will soon launch a large LCMR project to assess the implications of intensified forest management and atmospheric change on nutrient cycling and tree species suitability. Jim Perry, Nels Troelstrup, and Lloyd Queen will be involved in studies of land and resource management for the Lower St. Croix National Scenic Riverway. Mel Baughman has also played a key role by writing the forest stewardship plan for Minnesota.

On the production side of management, Howard Hoganson and Marc McDill are studying the impact of forest road and transportation systems in general on the Minnesota forest products industry. Glenn Furnier is advancing the use of genetic markers in the study of aspen and hardwood genetics. Carl Mohn and Kathryn Louis are making real progress in developing methodologies for the propagation of superior clones of native aspens.

In the international area, Hans Grøgersen has been asked to serve as advisor for a new initiative in international forestry which former president Jimmy Carter is starting through the Carter Center. Emphasis will be on the role of trees and forests in food

and energy security for developing countries. Hans was also the invited speaker at a National Academy of Sciences seminar on issues in international forestry. Ken Brooks held a training course on forest hydrology modeling at the Beijing Forestry University in the Peoples Republic of China. Dietmar Rose was able to visit and speak at a number of eastern and western European universities during his sabbatical in West Germany last year. Jim Perry has developed a number of ties with eastern European institutions during his sabbatical this past year. He was based at Oxford University last summer and his special interest has been water quality management.

We look forward to the next year as one of continued change and heavy involvement in forestry and related environmental issues by faculty and students alike.



**James R.
Kitts**
Acting
Department
Head

DEPARTMENT OF FISHERIES AND WILDLIFE

So, how was 1990 from your perspective? From mine it was a very interesting year and the time seems to have gone more quickly than usual. There are several opportunities just developing for our department. Ira Adelman has been on sabbatical, and during this time he and Anne Kapuscinski were successful in obtaining an LCMR grant. The grant (effective in 1991) provides for the purchase and development of a research/demonstration aquaculture facility. At this time we are looking for a suitable site close to campus. One major stumbling block to the further development of our aquaculture program is not having an adequate facility for production research and teaching. Once on-line, this facility will serve that purpose and serve as an active demonstration area for extension work.

While the facility is under development, Anne Kapuscinski will be on sabbatical. Her recent interest, in addition to aquaculture and biotechnology, is environmental education. She will be working on a book designed to communicate the principles of sound environmental

management to world-wide audiences.

Work is also underway to organize the University of Minnesota Aquaculture Center. This would be a vehicle through which to organize aquaculture research and extension education efforts across the University. It will also act as a link between University programs and the emerging aquaculture industry within the state. Ira Adelman, Anne Kapuscinski, David Landkamer, Jim Kitts, and Ying Ji are all working on this project. In addition, Ying is working to complete his Ph.D. and has also been hired by Minnesota Department of Agriculture as their aquaculture coordinator. Good luck Ying!

Yossi Cohen was successful in his application for a Hill Visiting Professor Fellowship. Dr. Tom Vincent from the University of Arizona is here fall quarter as the Hill professor. He is working closely with Yossi on ecosystem modeling and teaching a course in games theory.

Gordon Gullion completed his ruffed grouse research project this year. The University of Minnesota has participated in ruffed grouse research for 61 years and Gordy contributed 32 years to that total. As a small recognition of his efforts, the Department organized a dinner cruise for him and his family. Eighty-one friends joined Gordy and his family for three hours of dinner, conversation, and laughter on board the Anson Northrup as it navigated the Mississippi River.

Francie Cuthbert was promoted to Associate Professor with tenure and more or less simultaneously selected as the first director of graduate studies for the new graduate program in Conservation Biology. As a "reward" for her good work, the CB program

promptly received 60+ applicants while her fall course FW3052, "Introduction to Fisheries and Wildlife Management" increased in enrollment from the usual 80+ students to 163. Francie has been a little busier than she anticipated.

Pamela McInnes finished her M.S. in December 1989 (under the guidance of Yossi Cohen). In January '90 she began working as an extension educator in our department. Actually she has been my replacement for 1990 while I acted as department head. Pamela has done an outstanding job and, by her admission, received quite an interesting and challenging introduction to non-formal education. We're going to miss her energy and expertise come January '91 when the appointment ends. Thanks Pamela.

Many of our faculty - Jordan, Henry, Newman, Kapuscinski - have talented undergraduates working with them on research projects. The Undergraduate Research Opportunities Program (UROP) is an excellent mechanism for faculty to expand their research activities and give undergraduates the type of challenge that makes their education a more meaningful experience.

If you drop in (and please do) you will notice some familiar faces. Jo Schroeder, associate administrator, is busier than usual; the University is changing accounting systems. Gerda Hagen and Roslyn Zippa keep the things for the coop unit and the department running smoothly. Be sure to get acquainted to our most recent staff—Joan Watkins joined us in March and has been busy getting acquainted with our faculty, students, and vocabulary. Sharing an office with Jo is our quiet, resourceful student worker Julie Horn. Julie is working to complete her degree in interior design.

Jay Maher is still overworked and underpaid as the junior scientist in charge of supervising the laboratory operations. Among other things, Jay is our BEEP (Building Energy Efficiency Program) coordinator; that in itself could be a full-time job. Working with Jay is Beau Liddell. Beau is finishing his degree in ecology and is a very talented wildlife artist in addition to being a valuable laboratory staff member.

Junior scientist Sylvia Morse heads the lab staff for the coop unit. Working with Sylvia are lab techs Don Jaschke and Sam Miller.

Les Getting is the project coordinator of the Minnesota Aquaculture Education and Development program. Rounding out the laboratory staff is Mark Hove who supervises the aquaculture and transgenic fish lab. Mark replaced Mark Gross who has entered grad school. Finally, Bob Fashingbauer supervises Dr. Cooper's field crews for the annual Canada goose round-ups and goose and wetland research projects.

We have not resolved our space problem. However, things are beginning to happen. The former Health Services building has been assigned to our use. At this time it does not meet the building code requirements for permanent occupancy and it will be necessary to do extensive remodeling, but it's a start. We are occupying portions of the building now on a temporary basis. If we resolve the code deficiencies and remodeling needs, we will eventually occupy this structure. Obviously it will be sometime before we will make the move.

Have a great year in 1991. Stop in for a visit when you are in the area.



DEPARTMENT OF FOREST PRODUCTS



**James L.
Bowyer**
Department
Head

Much has happened over the past twelve months around the halls of Kaufert Laboratory, with the year marked by changing faces, a number of successes for faculty and staff, and a great deal of discussion about budgetary matters.

Despite generally declining budgets in this period of fiscal upheaval at both the state and federal levels, several new faculty joined the department over the past twelve months. The initiation of a new paper recycling research effort and associated investment in the paper science and engineering (PS&E) program, which I reported last year at this time, resulted in both new funds and two new PS&E faculty. Joining us last fall were Dr's. Mutombo Muvundamina and Henry Wells.

Mutombo Muvundamina, assistant professor, holds a Ph.D. degree in fiber and polymer science and a master's degree in chemical engineering from the University of Washington. In his new position, Mutombo's primary emphasis is on fundamentals of paper making and materials, with a focus on reuse and recyclability.

Henry Wells joined the department as an associate professor on August 27. Hank holds a Ph.D. degree from the Institute of Paper Chemistry and a baccalaureate degree in wood and polymer chemistry from the State University of New York at Syracuse. Most recently, he served as director of management science in the corporate management information system group of Champion International Corporation in Hamilton, Ohio. In his new position, Hank specializes on modifications of current papermaking processes, materials, and formulations to allow increased use of recycled fiber.

The arrival of Muvundamina and Wells is particularly welcome in view of the recent growth in student numbers in the paper science and engineering program. Some 51 students are now pursuing paper science oriented degrees, a reflection of the relentless work of paper science and engineering program director Bob Rouda.

Others joining the forest products family over the past year were Teddi Barron, Robert Seavey, Steve Johnson, Juraj Mlynar, and Rakesh Gupta.

Joining us last year, but too late for the last Gopher Peavey report, was Teddi Barron, an educational specialist. Teddi is responsible for coordinating video development and associated technology transfer programs in the Cold Climate Housing Center. She brings a master's degree in journalism and advertising, both from the University of Iowa. Teddi had been serving as a communication specialist in Business & Engineering Extension at Iowa State University prior to coming to Minnesota.

Bob Seavey began work on a part-time basis as a research associate this fall; Bob is involved in wooden bridge and other research and is teaching several undergraduate courses. Steve Johnson, who recently completed his master's degree program in wood composites through the department, joined the group this fall as an assistant scientist in wood composites. Juraj Mlynar joined the department late in 1990 as a research associate. Juraj, who holds a Ph.D. degree in organic chemistry from Slovak Academy of Sciences, Bratislava, Czechoslovakia, is working with Simo Sarkanen in the area of lignin chemistry. Rakesh Gupta hails from Cornell University where he earned a Ph.D. in Agricultural Engineering, with a focus in wood engineering. Rakesh is employed as a research associate and is leading the instructional effort in wood mechanics in addition to conducting research in this area.

The arrival of Rakesh Gupta was made possible by a unique opportunity which came the way of Bruno Franck. Dr. Franck received an invitation from the Swiss Federal Institute of Technology at Lausanne to spend a two-year leave working with a talented group of engineers who specialize in wood engineering. As a result, the Franck family

departed for Switzerland in late summer. Bruno will be returning to Minnesota every several months to keep track of projects underway here.

The flip side of the personnel equation for this year is that several key people left us for greener pastures. After some five years in Minnesota, David Ritter was lured away by the Masonite Corporation to work at their research and development center in St. Charles, Illinois. David had developed a reputation as a top-notch instructor and talented researcher, and we are sorry to see him go. Also departing after long periods of service were Vern Guyer, who finally pulled up stakes to pursue a Montana retirement, and Lynda Tucker, who decided after the birth of her second child that she had a full-time job on her hands right at home.

In the category of other changes, Bob Erickson entered a phased retirement program in June. Though these kinds of deals always look good on paper, my observation so far is that Bob is working as much as or more than as before, but is simply getting paid less. Speaking of getting paid less (or at least getting to keep less of it), Phil Steklenski became a married man in December; this, along with the recent initiation of a Ph.D. program should keep Phil out of trouble for some time to come. With regard to the rest of the gang (Gertjeansen, Hendricks, Milton, Petersen, Schmidt, Sarkanen, Kroll, Huelman, Larson, Sundeen, and yours truly) it has generally been a rapid paced and productive year. Many in this group, of course, (again including yours truly) are also progressively gaining more and more gray hair, wrinkles, and that kind of stuff - but then that's another story.

One new addition to Kaufert Laboratory over the past year is a display in the front entryway which chronicles the career of our late dean and friend Frank Kaufert. Put together by Tom Milton, this display serves as a reminder of the extensive contributions of Frank Kaufert to the forestry profession, and of his lasting influence on federal support for forestry and wood products research.

The 1990 departmental scholarship banquet was one of the best and most impressive ever. At this year's event, some twenty-five students received scholarships totalling \$32,500! Judging by the backgrounds, talents, and academic records of the students receiving scholarship awards, the competition is getting tougher every year. The number and size of scholarships awarded reflects continuing strong support for the program on the part of industry sponsors; twenty-two companies and industry associations provided funds for this year's awards.

At the top of the list of outstanding forest products students in 1990 was Jeff Martens, a senior in paper science and engineering. A scholarship winner, Jeff also received the University of Minnesota President's Student Leadership Award in recognition of outstanding leadership in student organizations and activities.

All of the good things notwithstanding, I must close this report on a somber note. Current University budget problems, which relate to fiscal difficulties throughout the nation and state economy, appear to be as serious, or more so, than anyone around here can ever recall. What this means to the department and college remain to be seen, but it looks as if very trying times may lie ahead.

Having used up my allotted space for yet another year, I want to extend an invitation for you to stop by and see us. We would love to find out what you are up to, and to show you around the ever changing campus.



DEDICATION OF THE NATURAL RESOURCES ADMINISTRATION BUILDING AND GREEN HALL ADDITION

The dedication of the Natural Resources Administration Building and Green Hall Addition and Remodeling, University of Minnesota, was held on October 18, 1990. The Natural Resources Administration Building and addition to Green Hall were Phase I of a 1980's capital improvement project for the College of Natural Resources. The remodeling of Green Hall, built in 1938, was Phase II.

The Natural Resources Administration Building and Green Hall addition provide new research laboratories for water quality, biotechnology, wood chemistry, stress physiology, and hydrology/soils; an expanded and consolidated Forestry Library; a collegiate computer laboratory; and offices and meeting rooms for programs and activities central to the college.

Designed by BRW, Inc., the addition encompasses approximately 19,904 square feet of new usable space. The research laboratories are located in the two stories flanking the auditorium on the east side of Green Hall. The computer laboratory, Forestry Library, offices, and meeting rooms are enclosed in the new four-level Natural Resources Administration Building (NRAB). NRAB is connected to the north end of Green Hall by an enclosed ground-level walkway and to Kaufert Laboratory, USDA Forest Service North Central Forest Experiment Station, and Hodson Hall by an underground walkway.

The remodeling of Green Hall provides an expanded Remote Sensing Laboratory, a redesigned auditorium, remodeled classrooms, remodeled teaching laboratories, offices for the Department of Forest Resources and Forest Resources Extension, as well as new offices and laboratories for several wildlife faculty from the Department of Fisheries and Wildlife.

In practical terms, the project provides the University of Minnesota, through the College of Natural Resources, a physical facility that contributes to excellence in undergraduate and graduate programming in natural resources. It includes research laboratories that compliment the college's field capabilities, a linking together of the several buildings comprising the natural resources education and research community at the north end of the University's St. Paul campus, and an aesthetically inviting and functional environment that encourages the creativity and productivity essential to achieving academic excellence.

The Green Hall Addition and Remodeling Project was a University capital request item submitted biennially to the Minnesota Legislature beginning in 1973. Working drawing funds of \$656,000 for both the addition and remodeling portions of the project began with the 1985-87 biennial request. Phase I was funded by the Legislature at \$5.28 million in 1985. Phase II was funded at \$4.76 million in 1987. Ground breaking and construction of the Green Hall addition began fall 1986. Phase I was completed in March 1988. Phase II was completed January 1990.

Speakers at the dedication ceremony included Richard A. Skok, dean, College of Natural Resources; University of Minnesota Regent Mary J. Page; Nils Hasselmo, president, University of Minnesota; C. Eugene Allen, vice president for Agriculture, Forestry and Home Economics, University of Minnesota; Ronald D. Lindmark, director, USDA Forest Service, North Central Forest Experiment Station; Joseph N. Alexander, commissioner, Minnesota Department of Natural Resources; and Janet Larson, class of 1990, College of Natural Resources.

by: Ann Mayhew, Assistant to the Dean



Left to Right: President Nils Hasselmo, Mary Page, Janet Larson, C. Eugene Allen, Richard Skok, Ronald Lindmark



Chin-Chao Koh

Richard A. Skok, Dean

CHIN-CHOA KOH AWARDED UNIVERSITY OF MINNESOTA'S OUTSTANDING ACHIEVEMENT AWARD

Chin-Chao Koh was presented with the University of Minnesota's Outstanding Achievement Award at a luncheon given in his honor during the XIX Congress of the International Union of Forestry Research Organizations (IUFRO) on August 8, 1990, in Montreal.

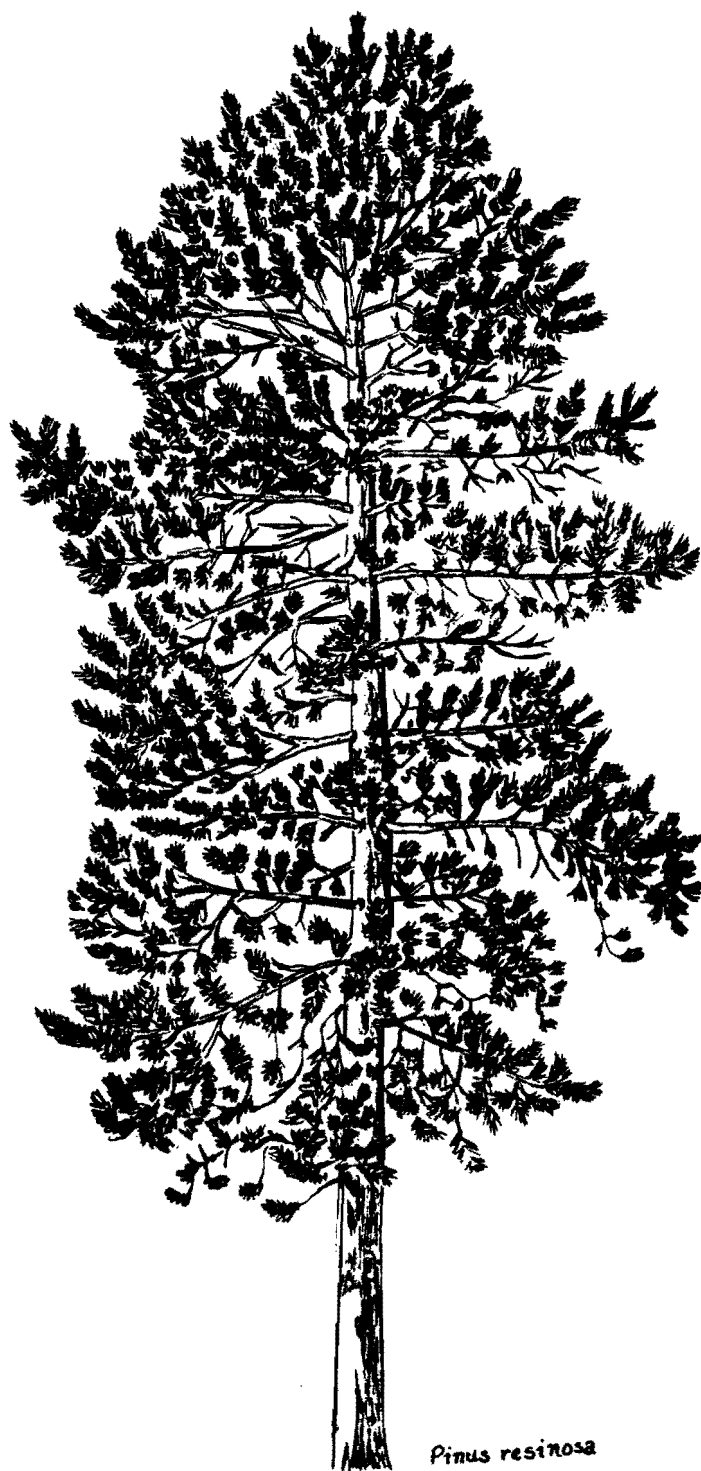
Koh, a student from Taiwan, received a master of science degree from the University of Minnesota in 1964 with a major in forestry and special emphasis on planning and watershed management. He returned to Taiwan to continue his career in forestry. Koh succeeded through a series of positions of increasing responsibility in the Joint Commission of Rural Reconstruction in the Republic of China (ROC), finally serving as deputy secretary general from 1977 to 1979. He was responsible for the development of the first island-wide forest inventory and provided early leadership in protection of the extensive slopelands on the island of Taiwan.

From 1979 to 1984, Koh served as secretary general of the Council for Agricultural Planning and Development. He then served as vice chair of the Council of Agriculture and as chair of the Committee on International Technical Cooperation for the Republic of China from 1984 to 1989. He led the Council of Agriculture in updating and completing policies on forestry, wildlife conservation, slopeland conservation and soil and water conservation and successfully saw these enacted into law by the Congress of the Republic of China. During the latter part of his term as vice chair of the Council of Agriculture, he served as the chief delegate of the ROC in international trade negotiations on agricultural products. The result of these negotiations was a significant improvement in balancing the trade deficit between ROC and its trading partners. Koh currently is president and chairs the board of the Taiwan Sugar Company.

The Taiwan delegation to the XIX Congress of IUFRO sponsored a luncheon during the congress held in Montreal in August, 1990. Richard A. Skok, dean of the College of Natural Resources, University of Minnesota, presented Koh with the University of Minnesota's Outstanding Achievement Award during this luncheon.

In his response to the award, Koh thanked the University for this high honor. He stated, "the solid training I underwent at the University in forest experimental design, watershed management and aerial photography well prepared me for a career that has kept growing rich and diversifying.... My role has evolved from a mainly technical one to one involving me in policy formation, trade negotiations, and bilateral cooperation. Through all these stages in my career, a progressive line can be retraced to the important source of nourishment which is the University of Minnesota."

by: Ann Mayhew, Assistant to the Dean



Pinus resinosa

COLLEGE OF NATURAL RESOURCES FACULTY



FOREST RESOURCES-FACULTY

DOROTHY ANDERSON

Assistant Professor

Joined the faculty in March 1990. Is responsible for conducting research and teaching graduate and undergraduate courses in recreation resource management. Received a Ph.D. in natural resources with an emphasis in human behavior in wildland recreation settings from Colorado State University. Has a master's degree in geography, emphasizing land use planning, and a bachelor's degree in geography, both from the University of Minnesota. Previous work was for the Minnesota Department of Natural Resources as a consultant to the Division of Forestry, Utilizing and Marketing Specialists.



MARVIN BAUER

Professor and Director, Remote Sensing Laboratory

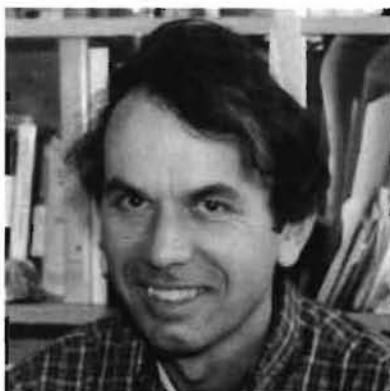
Teaches Remote Sensing of Natural Resources, Advanced Remote Sensing, and Remote Sensing/Forest Inventory. Research interests include measurements and modeling of the spectral properties of vegetation, and applications of quantitative remote sensing to inventory and monitoring natural resources and environment.



MELVIN J. BAUGHMAN

Associate Professor, Extension Specialist

Develops educational materials and programs aimed at improving management of nonindustrial private forest lands. Writes extension publications, produce slide sets and video tapes, and organize conferences and tours on a wide variety of forestry subjects. Research focuses on forest economics and policy studies related to private forest lands.



ROBERT BLANCHETTE

Professor

Teaches the Forest Pathology course in the Department of Plant Pathology. Active research projects include investigations of wood decomposition and industrial uses of fungi that selectively degrade lignin, biological control of soil-borne diseases in tree nurseries, screening trees for resistance to gall rust, and other studies involving forest and shade tree diseases.



CHARLES BLINN

Associate Professor/Extension Specialist

Co-teaches Forestry Applications of Microcomputers. Major areas of interest are in forest management, economics, microcomputer applications in natural resource management, and silviculture.



KENNETH N. BROOKS

Professor and Director of Graduate Studies in Forestry

In addition to part-time administrative duties as Director of Graduate Studies in Forestry, his teaching responsibilities include Forest Hydrology, Range Management, and a colloquium "Agroforestry: Sustainable Production and Watershed Management." Research continues on the hydrologic function of peatlands and further development of a hydrologic model of peatlands—upland watersheds in the northern Lake States. Work with the Forestry for Sustainable Development program has continued in watershed management.

THOMAS BURK

Associate Professor

Teaches Natural Resources Inventory, Forestry Applications of Microcomputers, and Forestry Biometry. Research interests include development of forest growth and yield modeling methodologies, use of Bayesian concepts in sample survey design and analysis, microcomputer implementation of forest projection and planning systems, and statistical computation programming.



CINDY BUSCHENA

Jr. Scientist

Work over the past twelve years has been involved with forest biology and tree physiology. Research interests include forest ecology and mycorrhizae.



PAUL V. ELLEFSON

Professor

Teaches courses in natural resource policy and administration. Author of forthcoming book Forest Resource Policy: Process, Participants, and Progress. Research continues on evaluation of forestry information flows to state legislative systems and assessment of policy analyst activities in natural resource agencies.



DAVID FRENCH

Professor

Lectures on selected subjects in forest pathology and teaches the Urban Forestry course. Advisor to urban forestry students. Research involves vascular wilts (Oak Wilt and Dutch Elm Disease), aspen cankers, dwarf mistletoe of spruce and jack pine, chestnut blight and other tree diseases.



GLENN FURNIER

Assistant Professor

Teaches Introductory Tree Physiology and Genetics, Plant Molecular Evolution, and Forest Resources Seminar. Holds a joint appointment in the Department of Plant Biology. Research is in tree genetics and mycorrhizal.



BARRY GOLDFARB

Research Associate

Studies genetics and molecular biology.



HANS GREGERSEN

Professor

Teaches Forest Economics and Planning, Natural Resources in Developing Countries, and Economic Analysis of Forestry Projects. Current research deals with forest and economic development of less developed countries, evaluation of forestry research and the process of technological innovation in forestry.



DAVID GRIGAL

Professor

Teaches Advanced Forest Soils and Silviculture: Soil Site Relationships at Cloquet. Interested in forest vegetation/soil relationships, including nutrient cycling, especially nitrogen nutrition and cation depletion; productivity on peatlands; and relationships between soil map units and forest productivity. Past work has dealt with biomass estimation, effects of forest disturbance, and numerical classification of forest ecosystems.

BARBARA KOTH

Assistant Extension Specialist

Faculty member of the Tourism center, University of Minnesota Extension Service, (a joint initiative of the University of Minnesota Department of Forest Resources, Sea Grant, and University of Minnesota Crookston) specializing in rural tourism, marketing, and international development.

HERBERT KULMAN

Professor

Teaches Forest Entomology, Current Topics in Forest Entomology and part of Wood Deterioration in Forest Products. Research includes ecological studies on forest insects, especially defoliators of spruce, fir, aspen and jack pine.



DAVID LIME**Research Associate**

Joined the faculty in March 1987. Teaches the Recreation Behavior course in the Forest Recreation program (RRM). Is affiliated with the University's Tourism Center coordinated through the Minnesota Extension Service and works as unit leader of the recently established National Park Service, Cooperative Park Studies Unit (CPSU). Research emphasis on water recreation and wilderness recreation use problems.

**STEVEN LIME****Research Fellow**

Specializes in remote sensing and geographic information systems.

**KATHRYN LOUIS****Research Associate**

Research associate lab coordinator and research scientist. Specializes in tissue culture of aspens, pines, and spruce.

**ALLEN L. LUNDGREN****Adjunct Professor and Research Associate**

Works with Dr. Hans Gregersen in managing the Forestry for Sustainable Development (FFSD) Program in the Department of Forest Resources. Develop training materials for development assistance organizations and national resource management agencies in the Third World. Helped organize and conduct training courses on forestry for sustainable development in Oxford, England; Durango, Mexico; Amman, Jordan; Nairobi, Kenya; and other locations.



ROBERT MARTIN
Research Associate

Joined the faculty in February of 1988. Co-teaches Remote Sensing of Natural Resources. Research interests include optical, radar, and video remote sensing. Related interests include the development of remote sensing systems for use in light aircraft and modeling the influence of canopy geometry on microwave and optical reflectance from vegetated surfaces. Holds Ph.D. and M.S. degrees in agronomy from Kansas State University and Texas A&M University respectively, and his B.S. degree is in geography, also from Texas A&M university.



MARC E. MCDILL
Research Associate

Began his career in forestry in 1980 as a seasonal forest technician with the USDA Forest Service in the Black Hills National Forest. Received a bachelor's degree in forestry from the University of Minnesota in 1984, and in 1986 completed a M.S. in forest economics at North Carolina State University. Was awarded a Virginia Tech Presidential Fellowship, and in 1989 received a Ph.D. in forest economics from the Virginia Polytechnic Institute and State University.

CARL MOHN
Professor

Teaches Dendrology, Introductory Tree Physiology and Genetics, and Forest Genetics. Research includes forest tree improvements through selection and breeding; hybridization in *Populus*.



JAMES PERRY
Associate Professor

Director of the Center for Natural Resources Policy Management and Director of Graduate Studies for Water Resources. Holds a Ph.D. in biology from Idaho State University, and has more than 20 years' experience in water quality and environmental management. Has presented lectures around the world on water quality. Recent work in the Forest Water Quality Program has included experimental manipulation of whole ecosystems such as lakes, stream channels, temporary ponds, and coastal tide pools.



LLOYD P. QUEEN
Research Associate

Teaches Remote Sensing of Natural Resources. Research involves quantitative approaches to natural resources inventory and management utilizing remote sensing and GIS systems. Received his Ph.D. degree in geography from the University of Nebraska-Lincoln. Holds an M.A. degree from the University of Nebraska-Omaha, and a B.S. degree from Mankato State University. His expertise is in remote sensing, digital image processing, GIS, automated cartography, and computer graphics.



DIETMAR ROSE
Professor

Teaches Forest Economics and Planning, Quantitative Techniques in Forest Management, and Role of Renewable Natural Resources in Developing Countries. The latter course is taught by a team of faculty members and addresses emerging international developing issues. Currently finalizing an integrated forest planning model with funding from the Legislative Commission on Minnesota Resources. Is leading efforts for coordinating and networking forestry research on an international level. Works with international organizations on the economic assessment of biodiversity.



HAROLD SCHOLTEN
Professor

Teaches Important Forest Plants at Itasca, Farm and Small Woodland Forestry, and Conservation of Natural Resources courses. Research is on designing farmstead shelterbelts, dry-land field windbreaks under center—pivot irrigation systems, and living snowfences to more effectively perform their major functions of controlling snow drifting and soil erosion, as well as providing wildlife habitat. Artificial scale model shelterbelts, windbreaks, and living snowfences are used to study the effects of design on snow distribution patterns.



PHILIP SPLETT
Instructor/ Career Opportunities Coordinator

Teaches Conservation of Natural Resources, Forest Resources Orientation, Field Forest Measurements, and Important Plants in Fisheries and Wildlife Habitats. Provides career information and assistance to students and alumni seeking employment. Coordinates the College of Natural Resources Scholarship and Alumni Relations programs.



EDWARD SUCOFF

Professor

Teaches and learns from a great group of students in Tree Physiology and Genetics, Tree Physiology Lab, Forest Ecology Lecture, and Field Ecology at Itasca. Current research examines aspects of global warming and the physiology of water stress. Also involved in the Forest Vegetation Management Program.



JERRILYN THOMPSON

Research Specialist

Joined the Forest Resources staff in September, 1990. Has research and administrative responsibilities with the Cooperative Park Studies Unit (CPSU). The CPSU has cooperative agreements with the midwest region of the National Park Service, and the Department of Forest Resources. Is involved in conducting resource-based recreation research.

NELSTROELSTRUP

Research Specialist

Works with forest water quality and freshwater ecology.



CARL VOGT

Extension Forester/Instructor

Teaches Introduction to Forestry, Introduction to Minnesota's Natural Resources, Directed Study - S.E. Minnesota Hardwood Silviculture and Forestry for Teachers. General Chairman, 1988 - Minnesota Forestry Fair. Main areas of interest are black walnut management, maple syrup production, hardwood silviculture and Christmas trees. Manages woodlots and tree farms as a consulting forester and operates a nursery specializing in nut trees and hardwood seedlings. Active in a number of forestry-related organizations and professional societies.



TERESE A. WALSH
Research Specialist

Major subject interests: quantitative techniques for improving tree breeding programs, growth and yield modeling, computer applications in Forestry. M.S. in Forest Biometrics, Virginia Polytechnic Institute and State University. Experience: USFS, Westvaco, Clemson University, consulting.



DAVID WALTERS
Research Specialist

Joined the department in July, 1988, as a research specialist with the Forest Growth and Yield Cooperative. Holds a master's degree in forest biometrics from Virginia Polytechnic Institute and a bachelor's degree in forest management with a minor in statistics from Oregon State University. Has past experience as forest statistician with Boise Cascade Corporation in Boise, Idaho.



HENRY WEBSTER
Research Associate

Project director for the Lake States regional forest resources assessment—a major analytic project being carried out for the Lake States Forestry Alliance. Previously served for fifteen years as State Forester for Michigan, and prior to that, as forestry school director first at the University of Wisconsin and then at Iowa State University.

North Central Experiment Station (not pictured)

Li Baillian, Research Associate
 Howard Hoganson, Assistant Professor
 Egon Humenberger, Assistant Scientist
 Gary Wyckoff, Scientist

Emeritus Faculty (not pictured)

Egolf Bakuzis
 Henry Hansen
 Frank Irving
 Vilis Kurmis
 Lawrence Merriam, Jr.
 Merle Meyer

CLOQUET FORESTRY CENTER-FACULTY



ALVIN ALM
Professor

Teaches Silviculture and Senior Seminar in St. Paul and Field Silviculture at the Cloquet Forestry Center. Advises a number of graduate students and conducts research in areas of regeneration and site preparation. Office is at Cloquet but often commutes to St. Paul.

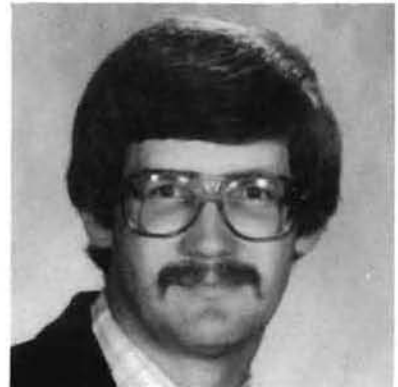


MARNA BUTLER-FASTELAND
Research Fellow,
Forest Vegetation Management Specialist

Directs the Forest Vegetation Management Cooperative at the Cloquet Forestry Center. Is responsible for conducting forest vegetation management research and transferring research results to forest managers.

RONALD SEVERS
Scientist/Forest Manager

Current responsibilities include developing forest management programs for the Cloquet Forestry Center and coordinating these programs with research activities at the Center.



ROBERT STINE
Research Fellow
Interim Coordinator, Cloquet Forestry Center

Directs the activities of the Minnesota Tree Improvement Cooperative, working out of the Cloquet Forestry Center. Genetic improvement work on red, jack, and white pine and on black and white spruce.



EMERITUS FACULTY

Alvin Hallgren (not pictured)

FISHERIES AND WILDLIFE-FACULTY**DAVID E. ANDERSEN****Assistant Professor**

Assistant Unit Leader at the newly established Minnesota Cooperative Fish and Wildlife Research Unit. Is developing a research program on the impact of human activity on wildlife and their habitats. Current research interests include applying theoretical statistical models of sampling from wildlife populations.

Recent research centers on communities of raptorial birds in east-central and southeastern Colorado. Related research has included projects on mule deer, pronghorn, swift fox, avifauna, raptors, aquatic vertebrates, and macroinvertebrates.

**YOSEF COHEN****Assistant Professor**

Teaches Wildlife Ecology Management: Planning, Policy and Administration. Involved in ecosystem modeling and competition in aquatic ecosystems.

**JAMES COOPER****Associate Professor**

Teaches Wildlife Population Ecology and Management, and Waterfowl Management. Research includes incubation behavior of North American waterfowl, ecology and management of Canada geese and trumpeter swans, and waterfowl ecology in an urban environment.

**FRANCIE CUTHBERT****Associate Professor**

Teaches introduction to Fisheries and Wildlife and is Director of Graduate Studies for the new Conservation Biology Program. Research includes behavior, ecology and conservation of nongame birds.



MARY G. HENRY
Associate Professor

Leader of a Cooperative Unit established in the Department of Fisheries and Wildlife, as a result of a Congressional appropriation in 1987. The units purpose is to foster applied research of interest regionally and nationally and to train graduate students in natural resource management. Research interests are in the areas of aquatic toxicology and fisheries biology. Teaches one graduate/upper division course each year while advising M.S. and Ph.D. students.



PETER A. JORDAN
Associate Professor

Teaches an undergraduate course in fish and wildlife habitats and a graduate course covering ecology and management of large mammals. Has been studying the ecology and management of moose in Minnesota and at Isle Royale for more than 20 years, and has expanded his moose research to Sweden. Has students examining the ecology and behavior of white-tailed deer. Researches the integration of moose management with forestry practices in the Superior National Forest. A member of the Board of Directors of the Minnesota Zoo.

ANNE R. KAPUSCINSKI
Associate Professor and Extension Specialist

Fields of interest include fish genetics, aquaculture, and conservation biology. Particularly interested in genetic variation for quantitative traits. Current research is focused on determining the ability of fishing to act as a form of artificial selection and to elicit significant genetic changes in exploited populations. Research includes genetics and development of genetically improved lines of fish for aquaculture. Serves as Aquaculture Specialist under the Minnesota Extension Service and Sea Grant Extension, and have begun collaborating on regional Extension programs aimed at improvement of the aquaculture industry.



JAMES KITTS
Associate Professor

Teaches Wildlife Management for Non-majors and Ethics in Natural Resources. Conducts workshops, seminars, and field courses in Management of Woodlands for Wildlife. Instructs master gardeners, structural pest control operators, food processors, and grain elevator operators. Counsels urban and suburban landowners in methods of landscaping and management to attract desirable wildlife. Contributes to life skills of youth as a member of the National 4-H Shooting Sports Projects Committee and, in Minnesota, as an instructor and judge for 4-H projects in Minnesota 4-H Natural Science Program.



DAVID LANDKAMER**Assistant Aquaculture Extension Specialist**

Extension programs in aquaculture. Conducts conferences, workshops, and seminars in aquaculture development. Counsels aquaculture clientele in technologies, regulations, and opportunities in aquaculture.

**RAYMOND NEWMAN****Assistant Professor**

Teaches Fishery and Wildlife Management, Stream and River Ecology, and assists with Ethics and Values in Natural Resource Management and Fishery and Wildlife Habitats. Research interests focus on stream ecology and feeding relations with an emphasis on factors affecting trout populations, the effects of human disturbance on stream fish and invertebrates, and the potential role of defensive chemicals in aquatic plant-use by invertebrates. Specific projects include the effects of beavers on trout, trout streams, and the trophic relations of the exotic ruffe.

**DAVID SMITH****Associate Professor**

Teaches Fisheries and Wildlife Orientation and Introduction to Fisheries and Wildlife Management. Research is on conservation of small wildlife populations.

**PETER SORENSEN****Assistant Professor**

Joined the University in 1988 as an assistant professor in Fisheries. Teaches courses on the physiology and behavior of fish. Research focuses on the relationships between fish physiology and behavior with how these are influenced by the environment. Is interested in the senses of smell and taste in fish and determining the roles of fish sex pheromones in reproduction. Holds a doctoral degree in biological oceanography from the University of Rhode Island and a bachelor of arts degree in biology from Bates College.



GEORGE SPANGLER

Professor

Teaches Ecology of Fish Populations, and Fish and Wildlife Population Dynamics. Research includes fisheries management, fishery population analysis, and modeling predator-prey interactions.



THOMAS WATERS

Professor

Teaches Production Biology in Fishery Habitats. Research includes stream ecology and secondary production. On phased retirement (half-time) until 1991.

EMERITUS FACULTY

Daniel L Frenzel, Jr. (not pictured)

William H. Marshall (not pictured)

FOREST PRODUCTS-FACULTY

TEDDI BARRON

Education Specialist/Communications Media

Works with the Cold Climate Housing Center as the video coordinator. Holds a M.A. in American Studies/Architecture History.

ROBERT ERICKSON

Professor

Teaches Topics in Wood Moisture Relationships. Research focuses upon developing improved processes for the drying and overall production of lumber, the analysis of drying stresses and strains, moisture movement and its effects, and the analysis of perpendicular-to-grain creep in first-dried wood.



BRUNO M. FRANCK
Assistant Professor

Teaches Mechanical Properties, Mechanics and Structural Design with Wood Products. Will also teach Design of Wood Structures and Mechanics of Wood and Wood Composites. Research deals with the development of expert systems for the evaluation of structures and the application of artificial intelligence, qualitative physics, and expert systems to the design of wood structures.



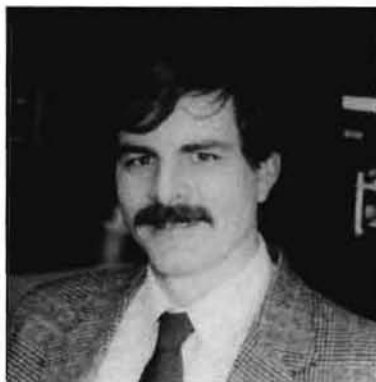
ROLAND GERTJEJANSEN
Professor

Teaches Pulp and Paper Technology, Wood-Base Panel Technology, and Advanced Topics in Panel Products Technology. Research is on wood-base composite products.



LEWIS HENDRICKS
Professor/Extension Specialist

Conducts the annual two-week Lumbermen's Short Course and annual Hardwood Lumber Grading Short Course. Author of publications dealing with wood heating, preservation, ice dams, cold climate construction techniques and wood finishing topics. Is a consultant to wood industries and homeowners. Remains a board member of Woodcraft Industries, St. Cloud, Minnesota, since 1971.

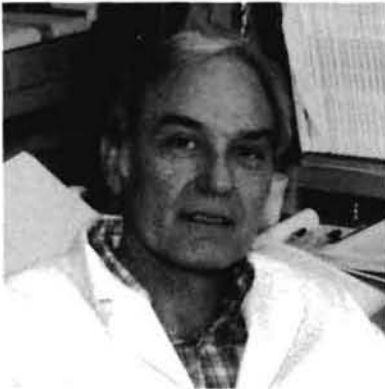


PATRICK HUELMAN
Associate Professor/Extension Specialist

Coordinator and director of the Cold Climate Housing Center (CCHC). CCHC is a source of comprehensive information relative to the design and operation of energy-efficient homes. Its objective is to assist the homebuilding industry to improve dwelling life.

STEVEN JOHNSON
Assistant Scientist

Specializes in wood composite products technology.



ROBERT KROLL
Research Associate

Performs composite panel research; specifically working with anatomical structures—features of balsam poplar as they relate to problems in machinability. Performance of wood-based siding research. Shop supervisor at Kaufert Laboratory.

TIMOTHY LARSON
Assistant Professor

Works in the Cold Climate Housing Center, which aims its programming towards the design, construction, and occupation of residential housing. Directs workshops, courses, and seminars are directed to builders, teachers and consumers to ensure housing that is comfortable, healthy, durable and energy efficient. Research evaluates the effectiveness of radiant barriers on reducing heat flux out of a house through the ceiling.



THOMAS MILTON
Associate Professor

Designs and implements extension programs and publications for Minnesota's sawmill industry and wood product manufacturers. Co-edits the Minnesota Forest Products Marketing Bulletin.



JURAJ MLYNAR
Research Assistant

Research involves lignin chemistry. Holds degrees in both organic and analytical chemistry.

MUTOMBO MUVUNDAMINA
Assistant Professor

Teaches courses in paper science and engineering and paper recycling. Holds a Ph.D in fiber and polymer science and a master's in chemical engineering from the University of Washington



IGNACE NYANDW
Research Assistant

Currently researching structural grading and engineering properties. Holds a strong background in structural and civil engineering.



HARLAN PETERSEN
Assistant Professor

Specializes in extension programs in forest products utilization and marketing with emphasis in the areas of wood drying and wood moisture relationships. Coordinator for the undergraduate program in Forest Products Marketing. Teaches Forest Products Marketing and Wood Industry Tours. Advises the student chapter of the Forest Products Research Society.



ROBERT ROUDA

Professor

Teaches Pulp and Paper Process Calculations (including the use of microcomputers for process modeling and simulation), Pulp and Paper Process Operations, and Paper Engineering Laboratory. Interests lie in the development and application of modern computer process simulation technology to the improvement of pulp and paper process operations. This includes the development of computer simulation laboratories for graduate and undergraduate education seminars and workshops for industry, and associated computer programs for these purposes.



SIMO SARKANEN

Associate Professor

Course instructor for Wood Chemistry I and II and Adhesion and Adhesives. Research is on physicochemical properties of lignin derivatives, biodegradable plastics from byproduct lignins, and lignin biodegradation.

ELMER SCHMIDT

Associate Professor

Teaches Wood Deterioration, Undergraduate Seminar, Methods and Advances in Wood Protection and Mushroom ID and Ecology (Extension course). Research is on control and application of fungi in forest products. Other projects include: Fumigation of export oak, spore germination of wood decay fungi, preservative systems for wood composites, remedial treatment of decay, shiitake mushroom production on Minnesota hardwoods, biodegradation of kraft lignin components, and evaluation of new wood preservative systems, and biodeterioration in hardwood fuel chips.



ROBERT SEAVEY

Research Assistant

Teaches Wood Structure and Identification, and co-teaches Wood as a Raw Material. Research deals with timber bridges and wood moisture relationships. Also active as a wood products consultant. Ph.D and masters from the University of Minnesota and a B.A. from Lawrence University.

PHIL STEKLENSKI**Research Fellow**

Teaches an undergraduate Seminar and Analysis of Production Systems, which deals with material balances, equipment selection, economic analyses, and microcomputer use in forest products manufacturing and marketing operations. Serves as project leader for short-term assistance projects for forest products companies. Performs collaborative and independent research related to construction, performance, economics, and manufacturing processes involving building materials and housing components.

**HENRY WELLS****Associate Professor**

Specializes in paper science and engineering. Interests include computer simulation (in paper science) and process control.

**IRA ADELMAN****Department Head - Fisheries and Wildlife**

Fisheries and Wildlife department head. Was on sabbatical leave for the 1990 calendar year working with the Minnesota Department of Natural Resources as special assistant to the director of the Division of Fish and Wildlife.

1990-1991 STAFF



COLLEGE OF NATURAL RESOURCES ADMINISTRATION

Left to right: Karen Kanda, Executive secretary
Ann Mayhew, Assistant to the Dean
Marilyn Workman, Administrative Director



COLLEGE OF NATURAL RESOURCES ACCOUNTING AND STAFF

Left to right: Karen Dewanz, Judy Rosassen, Kara Henke,
Sue Johnson, Shelly Duverson



**GRADUATE STUDIES DIRECTOR
FOREST RESOURCES
AND FOREST PRODUCTS**
Kenneth N. Brooks



ASSISTANT DEAN
John V. Bell



OFFICE FOR STUDENT AFFAIRS
Bill Ganzlin, Prospective Students Coordinator
Marni Lucas, Principal Secretary
Phil Splett, Career Opportunities Coordinator
Sandy Gibbs, Senior Secretary
John Bell, Assistant Dean
Janet Larson, Degree Program Advisor (Not Pictured)



FOREST RESOURCES STAFF

Left to Right: Clara Schreiber, Janelle Schnadt,
Kathy Middleton, Marcia Ritterling



**FOREST RESOURCES
EXTENSION STAFF**

Denise Hankey
Mary Ann Hellman



FOREST PRODUCTS STAFF

Left to Right: Terri Aistrup, Mary Ferguson
Cheryl Bruhn



FISHERIES AND WILDLIFE STAFF

Left to Right: Joan Watkins, Gerda Hagen, Jo Schroeder, Roslyn Zippa, Julie Horn



FISHERIES AND WILDLIFE LIBRARIANS

Lorilee Kerr, Susan Stegmeir



FOREST RESOURCES LIBRARIANS

Jean Albrecht, Cheryl Owens

CLOQUET STAFF



FOREST TECHNICIANS

Chuck Kramer (left) and John Blanchard



CLOQUET MAINTENANCE CREW

Gene Spicer, Mark Anderson



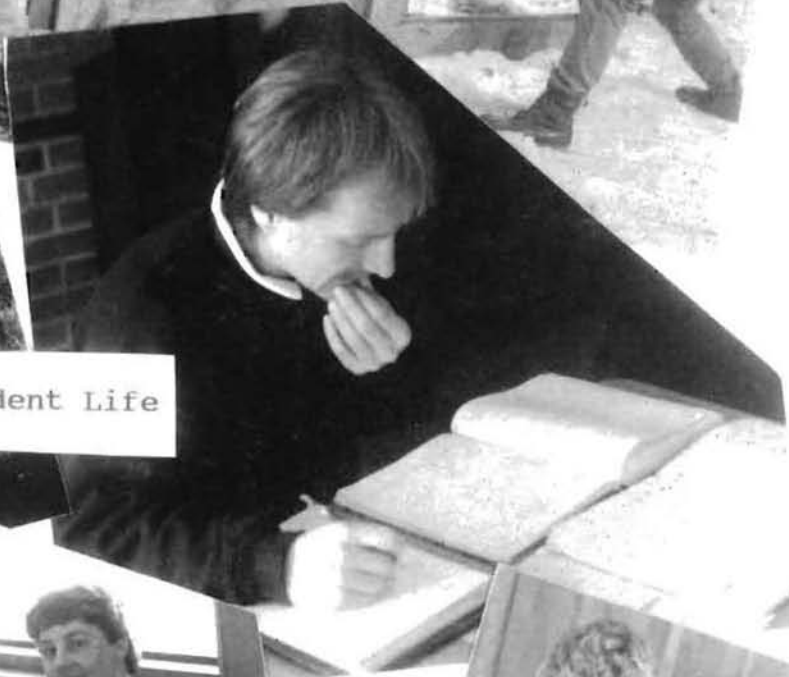
CLOQUET ADMINISTRATION STAFF

Left to Right: Phyllis Bakka,
Bonnie Jones, Karen Nelson



CLOQUET KITCHEN STAFF

Marlys Tate (left) and Florence Meger



Student Life



GRADUATING SENIORS



KAREN BONDE
Natural Resources and
Environmental Studies

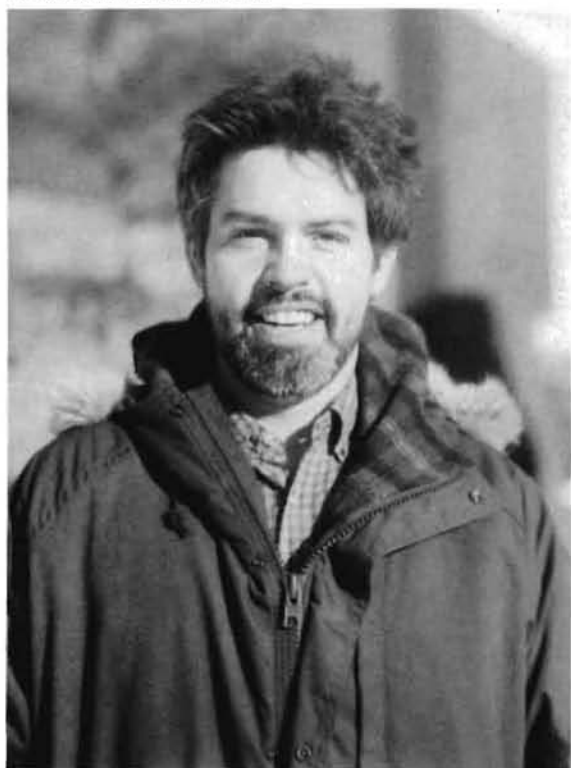


JAY BREZINKA
Fisheries and Wildlife

RICHARD CAMP
Fisheries and Wildlife



SCOTT COLGAN
Natural Resources and
Environmental Studies



DONALD DEHN
Urban Forestry

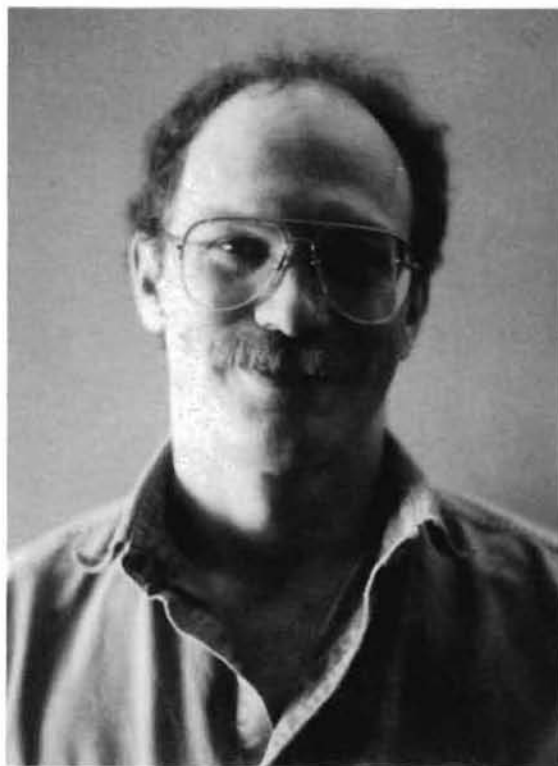


DONALD DINGMAN
Urban Forestry

RICHARD DUNKLEY
Forest Resources



THOMAS EDGREN
Forest Products





MARGARET ELIASON-ROBERTSON
Fisheries and Wildlife



KEVIN JESSEN
Fisheries and Wildlife

STEVEN KOEPKE
Forest Products



JIM LEUTHNER
Urban Forestry



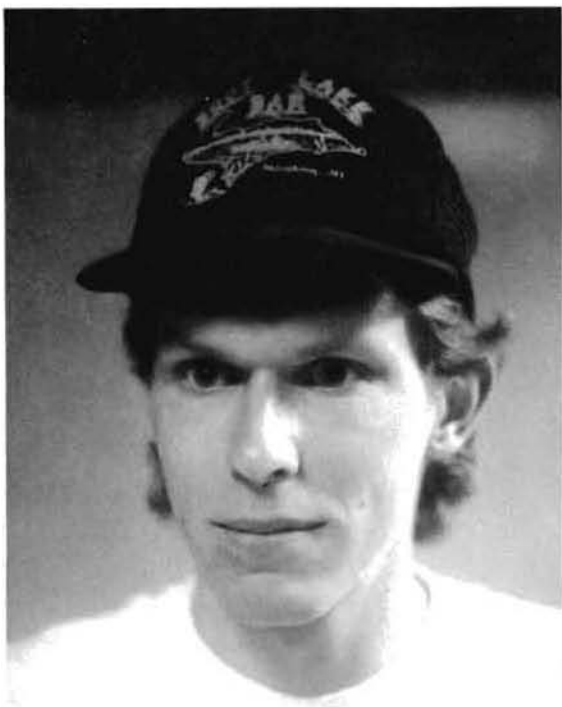


TROY LINDGREN
Forest Resources



SHANE McBRIDE
Fisheries and Wildlife

DAVID MICKELSON
Fisheries and Wildlife



DAVID NELSON
Forest Resources





CRAIG OLSON
Forest Products

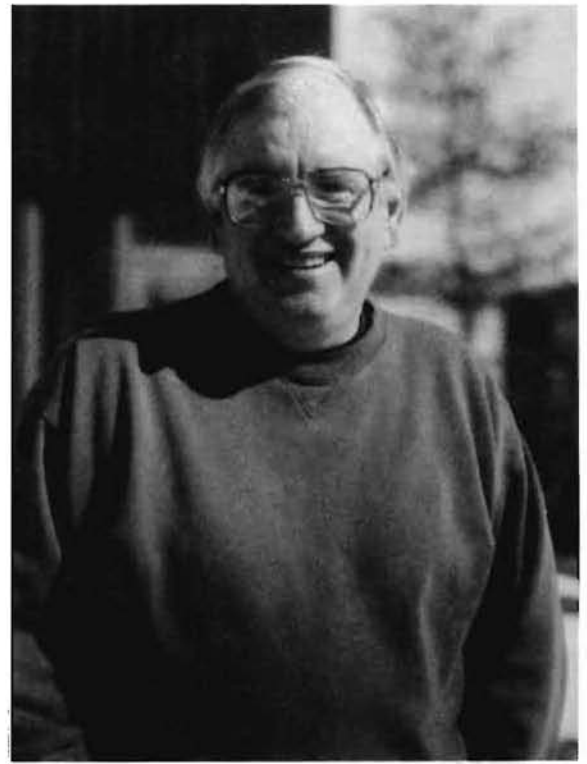


CAROL WILLIS PEARSON
Fisheries and Wildlife

RAYMOND RAINBOLT
Fisheries and Wildlife



CHARLES ROCHFORD
Forest Products



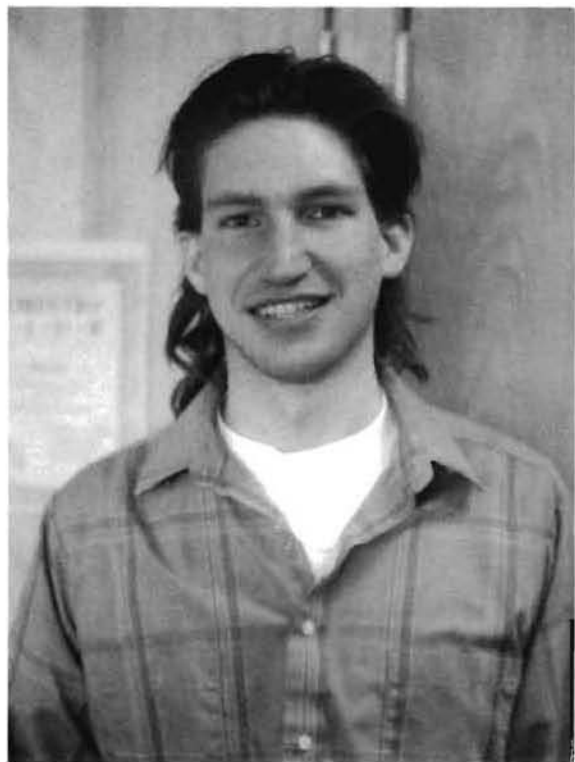


DANIEL ROSE
Forest Resources



DAVID SCHULZ
Forest Resources

TIMOTHY SEILTZ
Forest Resources



AMANDA SJOQUIST
Urban Forestry



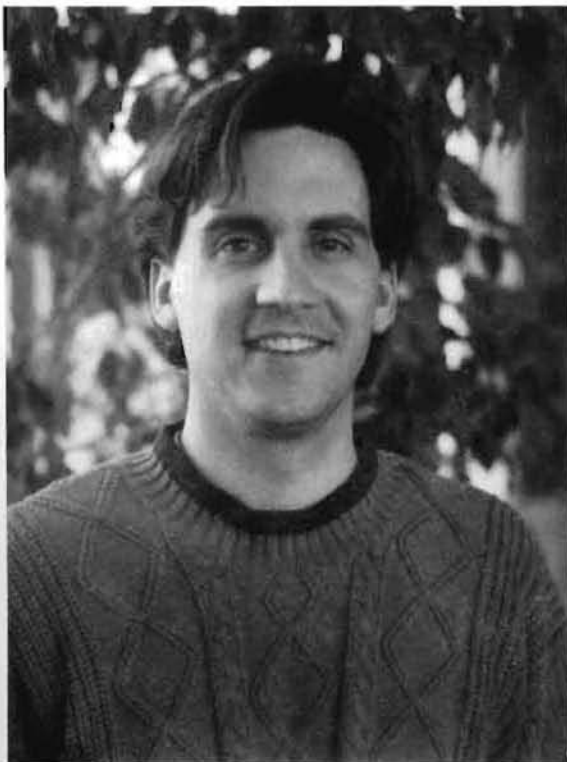


KATHY SMITH
Fisheries and Wildlife

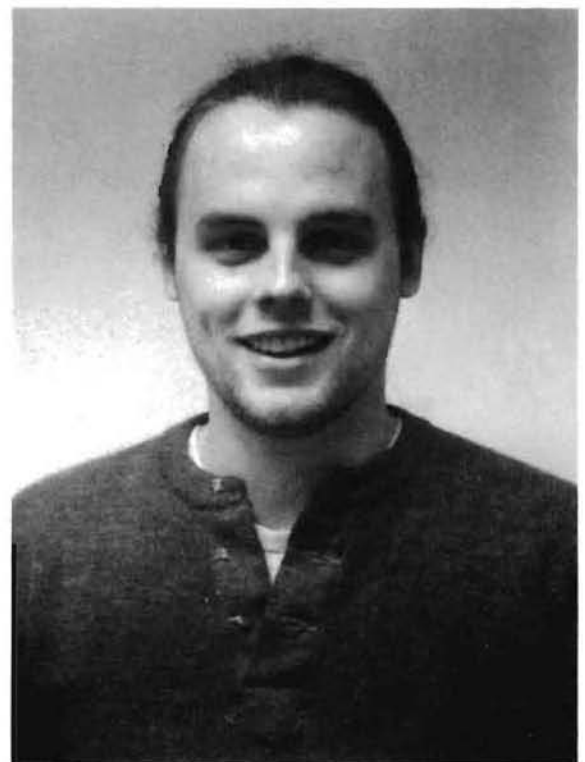


KAREN TERRY
Fisheries and Wildlife

ROSS TOEPEL
Natural Resources and
Environmental Studies

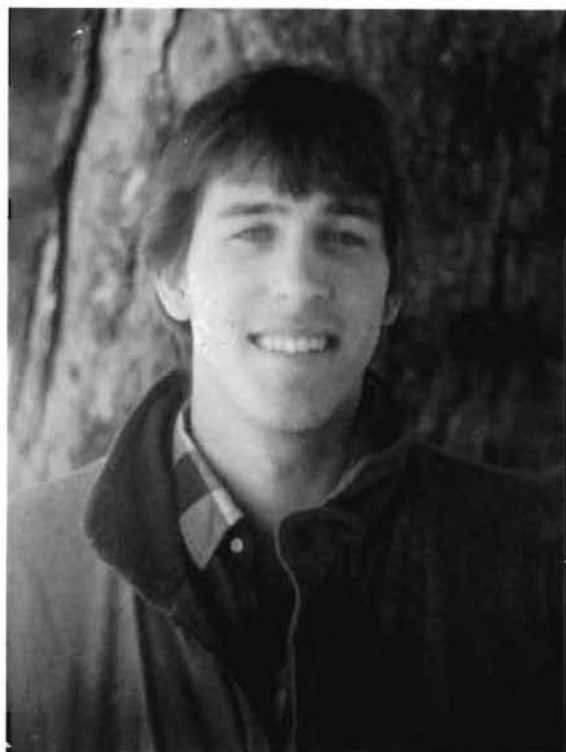


RICHARD VOLDSETH
Forest Resources





LAN VU
Forest Products



LANCE WASNIEWSKI
Forest Products

SARAH WINSLOW
Fisheries and Wildlife



MICHAEL WRIGHT
Forest Products



**GRADUATING SENIORS
NOT PICTURED**

FALL 1990

DONALD BLAKE
Forest Resources

THOMAS RYKKEN
Recreation Resource Management

WINTER 1991

MARK EIDAH
Fisheries and Wildlife

DOUGLASHYLAND
Forest Products

JAMES MUCK
Fisheries and Wildlife

MANAL NADAR
Fisheries and Wildlife

CHARLES REINMUTH
Forest Resources

SPRING 1991

TODD ANDERSON
Forest Resources

THOMAS BERG
Forest Products

ROBERT CIBUZAR
Forest Products

TAMMY FISHER
Forest Resources

PATRICK GALDONIK
Forest Resources

DONAL HOLOHAM
Fisheries and Wildlife

NACNY HOWELLS
Forest Resources

DANIEL JOHNSON
Forest Products

TIMOTHY KNOX
Forest Products

JOHN LIJEWSKI
Forest Products

JOHN LOWDER
Forest Products

JOHN METZA
Forest Products

ERIC NORDLIE
Urban Forestry

TERESA PASZEK
Forest Products

STEVE RAAD
Forest Products

S. BRADLEY SINN
Recreation Resource Management

CARL TOIVARI
Forest Resources

NEIL VANDERBOSCH
Fisheries and Wildlife

MARK WEEGMAN
Forest Products

Superior

The sleet was beating down at a severe angle, forced to pelt the lake and ice and rock by the provoking wind out of the north. Where this icy rain met the lake it disappeared, accumulating only near the horizon until sky and water melted into one seamless gray. Lake Superior was in a surly mood. Tugging slowly westward, large ice flows far out in the lake provided the only sense of depth. Eventually, I imagined, they would end up in the Duluth harbor 100 miles down the lake. Closer to shore, the black water was a slurry of splintered ice sheets and bobbing flows. Buoyed between the ice, gulls jockeyed to distance themselves from the gnashing edges. Remnants of these flows were beaching along the shore, grist to be milled between rock and wave.

The calendar said today was the first day of spring. There was no running sap or melting snow on this equinox and the musty smell of thawing ground was still held in a winter grip. This hike along the North Shore started at the mouth of the Cascade river and had taken me into a small bay skirted by cedars. Repelled by a rocky point to the north, the wind diverted from this protected stretch and a calm air hugged the shore. Puzzles of stacked ice had fused into a false extension of the land and formed a white cap on the bay. One piece near the lake's edge carried a duck. Frozen onto the ice, the goldeneye died during the winter and now rested on its back, preserved by the cold spell of the lake. The orange feet were tucked into a soft belly of down and its black head turned profile on the ice. The bird had not been found by scavengers and was unscarred except for a missing golden eye. How far had this bird drifted across the lake? How long before it would be discovered by the otter whose tracks I had seen earlier on the snowpack?



My way along the shore was blocked by a finger of rock forming the bay's windbreak and I entered the shroud of cedars edging the shore. Deer had made tentative steps out of these trees but left only scattered tracks punched through the crusted snow before returning to their worn trails. A winter of heavy use by hungry deer had left the browse tightly cropped and a litter of droppings among the maze of packed trails and shallow beds. There had been other visitors to this yard and in the soft snow of a previous thaw, wolves left huge paw prints on the trails of the deer.

The trail parted dried grasses and pruned Dogwood before it emerged from the cedars onto a large lava outcrop. Here the wolves brought down their quarry. It was an old kill and had been abandoned, leaving only the ribs and a few torn scraps of hide. Today, only sleet gnawed at the bones and a chickadee picked at a string of suet left by the pack after their meal.

Rounding the point, I met the wind and a shore littered with piles of stranded ice. Forced to place each step on this teetering mass, I didn't notice the cedars retreat until I ascended the lake's

Equinox

Story and Photographs by Jeff Korte

rimrock heaved above the waterline. Only patterns of lichen and stunted birch kept their hold on this exposed rock. This high vantage revealed an endless, shaken tumbler of icewater with a horizon distorted by tremendous swells in the middle of the lake. The expansive ice flows were breaking up and scattering into thousands of bobbing shards. As the swells rolled toward shore, they carried an accumulation of ice debris until they met the cliff under my feet. Slapping into this sudden resistance, spouts of water shot upward spitting out icy shrapnel before they collapsed to drain back into the lake.

Dramatic events to witness but only a light buffeting when compared to Lake Superior's early beginnings. A billion years ago during the Precambrian Era, deposits of molten rock spewed out of the earth to solidify and form the great basin that would eventually hold Lake Superior's 2,860 cubic miles of freshwater. 10 percent of the earth's liquid fresh water was slogging back and forth,



polishing a new face into the North Shore. The later stages of the Precambrian age passed into the Keweenaw age with the splitting of earth into the Midcontinent Rift System. Through this split, volcanic eruptions continued to belch lava into hardened layers of rock. These lava deposits left an endless variety of rocky strands and sheer cliffs giving the shore its rugged identity. The cooling climate after this volcanic activity allowed creeping tongues of great ice two miles thick to advance into the young Superior Basin. The Ice Age was covering the Canadian Shield and carving more features into the aging face of the shore. In its retreat, the Superior Lobe scoured the low-

land and deposited the debris as glacial drift forming terminal moraines at its margins. These moraines have formed the lake and hill topography of the north country. Pooling meltwater, trapped between the moraines and receding lobe, formed large glacial lakes. Gravel beaches, terraces, and dried up outlet streams remain today and whisper the location of these vast, early lakes. For more than two million years, this glacial slow dance etched a rugged beauty into the Great Lakes region.

A bursting wave smacked the cliff and I turned to shed the spray of ice when I noticed a feathered hunter at the edge of the trees. A Barred Owl had dropped on its prey and paused, mantling its catch before lifting off the snowpack to return to its perch. Shifting its weight nervously, The owl's bobbing stare was sizing me up. It apparently didn't like the attention and turned its back before swallowing the mouse. Content for now, the owl dropped out of the tree and with silent strokes, melted into the fading light.

Heavy clouds had concealed the sun all day and now the spreading dusk followed my path along the shore. I considered turning back but there always seemed to be one more rocky point to visit and I followed the gulls as they led me through the wind along the Lake Superior shore.

ALUMNI SPOTLIGHT: WILLIAM MORRISSEY

Director of Parks & Recreation

Minnesota Department of Natural Resources

Past, Present, and Future

Ask a CNR alumnus about his college days and his face lights up as he appears to be in a reverie of an endless stream of memories. If the alumnus is Bill Morrissey, B.S. in Forestry 1972, the stories are educational as well as entertaining.

What was student life like at the College 20 years ago? About the academic aspect (of course the main reason we are all here) he recalls long hours of studying in the old 15 Green Hall study room and helping each other with Trivia Pursuit-style quizzes to learn material. In those senior seminars when they seemed so knowledgeable, when tough questions were posed by classmates, is it possible that the questions may have been prepared ahead of time—by the student presenting??

He also has fond memories of many professors committed to helping their students. Some that stood out: "Arizona Arnie" Mace was kind enough to repeat lectures for students who had trouble understanding difficult concepts, while Larry Merriam and Frank Irving took extra time to make sure students knew that someone cared. Bill recalls that the person most helpful to him was Ken Winsness, who ran the Office for Student Affairs. "He was great—tough but understanding. Many of the College's current professors and advisors, like John Bell, Assistant Dean of College of Natural Resources, carry on that tradition," says Bill.

In addition to the high quality education gained in the classroom. Bill feels that great benefits can be gained from involvement in activities in the College. He was active in the Forestry Club, the Conclave team, Forester's Day, Society of American Foresters, and the American Forestry Association. He served as editor of the Bull of the Woods (a monthly College publication) and as managing editor of the famous Gopher Peavey. What did he gain from his participation in these activities? Bill says that being a part of the clubs and activities on campus benefits a student academically, socially, and even professionally. Students study together (an atmosphere of friendly competition prevails), and of course form close friendships. These friendships often continue beyond college days and throughout professional life. He names numerous classmates now employed in the natural resources professions with whom he still maintains friendships and working relationships.

Summer internships are also highly beneficial to students as an opportunity to use knowledge gained in the classroom in real life. His summer internship experience was gained first with the USFS in Tofte, Minnesota, and the next summer in northern California.

After graduation, Bill worked as the assistant to the director of undergraduate programs in the College of Forestry. In 1973 he obtained his first position with the Minnesota DNR as assistant state trail coordinator. From there he moved to trail planning supervisor, forest planning supervisor and regional administrator for the Rochester region. Since 1987 he has been the director of the division of Parks & Recreation. He is responsible for Minnesota's 65 state parks and other areas (200,000 acres total) and supervision of over 200 full-time and 600 seasonal employees. The division has an

annual operating budget in excess of \$17 million, and Bill is responsible for all administrative operations, acquisition programs, planning, development, and marketing.

It would not be too much of an exaggeration to say he loves his job and his involvement with the state park system. "The importance of the state parks in Minnesota cannot be overstated," he says. "Parks aren't just for recreation. They are one of our state's most important resources. In addition to outdoor recreation and their importance to Minnesota's economy, they preserve our cultural and natural resource heritage. The best native prairie in the state, rare and endangered plants and animals, the Banning rapids at Kettle River, the best remnants of old growth forests, the headwaters of the Mississippi—these are all found in Minnesota's state parks, the keepers repository of our heritage."

His thoughts on the increased interest in natural resources education today? More young students are getting an exposure to environmental education in their early years. This fact combined with "environmental brinkmanship" are two reasons he sees for the increased interest in studying the environment subject. Environmental brinkmanship was a concept proposed by Carl Rydell, professor of forest resources at the School of Forestry in the late 1960's, that suggests that people finally pay attention when things are at the "brink."

Bill's advice to students is practical yet lighthearted. "Follow the rules, but work for change when you can. There is no substitute for hard work. Communication skills are very important—especially listening. This field is extremely important, but keep things in perspective. Be flexible, but don't compromise your principles. The world is more political than most idealistic students realize—negotiation and compromise are important. Remember that there may be more than one right way to do things. And, keep your sense of humor."

Finally, Bill's description of his position can be applied to all of us: "We're here temporarily to manage resources for the people yet to come. Hopefully we will leave the place in equal or better condition."

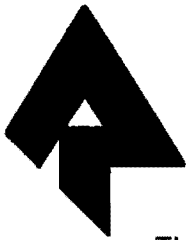
by: Mallory Wingrove



William Morrissey 1968



William Morrissey 1991



SPONSOR SPOTLIGHT: RAJALA COMPANIES

The oldest sawmill site in Minnesota dating back to 1902, is located in Big Fork. This was the humble beginning for Rajala Companies, now headquartered in Deer River. Today Rajala has 160 employees, and its logging operations stretch from Aitkin to the Canadian border.

The Rajala family has been a part of the company since Ivar, current president Jack Rajala's grandfather, first began operations. Fourth generation John, Plant and Sales Manager, continues the tradition.

Rajala Companies' primary products are solid lumber products, such as red and white oak, black ash, hard maple, aspen, white pine, and red pine. The company sells directly to manufacturers and prides itself on being close to its customers. Confronted with growing complexity and change in the marketplace, Rajala Companies attempts to find its niche. John says he "wants to understand manufacturers' needs and respond by working with them on their products and processes." He adds, "Our goal is to be a world-class lumber manufacturer." In the future, John says they would like to apply for the prestigious Malcolm Baldrige National Quality Award.

Rajala's primary emphasis in the future will be to continue to develop high quality hardwood stands. This offers significant economic growth opportunities, since the U.S. is the major hardwood supplier in the world. John credits his father, Jack, and Jim Sparke (a School of Forestry graduate and former Rajala employee), with a great deal of work and progress in the development and management of hardwood stands. The company will also emphasize regeneration of (softwood) white pine. White pine re-forestation will be done predominantly in Itasca, St. Louis, and Aitkin counties. Rajala currently plants 250,000 white pine seedlings yearly.

Rajala Companies' association with the College of Natural Resources began in the 1950's, and they have supported the Gopher Peavey since the early 1970's. Jack feels that CNR and the forest products industry have been closely linked since 1968-69 when forest products faculty members were called upon for their expertise concerning engineering properties and design values of certain tree species in the lake states. He believes that the research performed by CNR faculty on lumber standards, kiln drying and other means of drying timber, as well as providing technical knowledge to the industry, have been the college's strengths over the years.

A variety of foresters and forestry organizations frequently ask Jack to speak at workshops throughout the country on planting and managing red oak and white pine stands. Rajala Companies prides itself on being a leader in hardwood stand management and wishes to promote biological diversity in conjunction with the public agencies.

The Gopher Peavey salutes Rajala companies for its contributions to the industry and especially for its support of the Peavey through the years.

by: Mallory Wingrove

NATURAL RESOURCES AND ENVIRONMENTAL STUDIES: A NEW MAJOR FOR A NEW AGE

When the College of Forestry became the college of Natural Resources, it did more than just change its name. It added a new major and many new faces—faces that might otherwise have never seen the St. Paul campus.

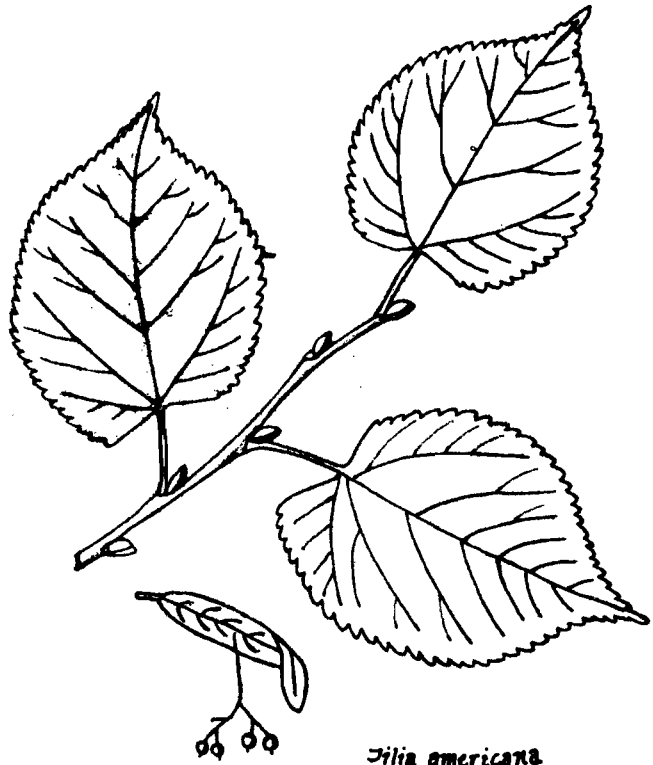
Take me for example, a Kansan headed “back East” for school. No one expected to see a possible English major suddenly taking up residence in St. Paul, Minnesota. However, that’s what happened when I found out about the Natural Resources and Environmental Studies program.

A broad spectrum of classes are required in this curriculum—political science, geology, soils, fisheries and wildlife, and conservation of natural resources. Students also choose an area of concentration. I chose Resources and Environmental Protection, since law school is a possibility in my future.

This new program combines the traditional with the non-traditional. Classes that included predominantly males with similar backgrounds have grown to include women and students with more ethnic diversity. It’s good to see a program that offers so much to so many through education, practical application, and understanding of the field.

The program continues to expand and reach new heights. The faculty are top-notch, the classes are interesting, and everyone is dedicated. This enables people concerned and interested in the environment to mold a major that fits them. This flexibility continues to attract competent students who are truly enjoying going to school.

I couldn’t be happier with my new home and my new classes. Natural Resources and Environmental Studies is a great program worth exploring. The earth is the only home we’ve got, and people need to learn how to take care of it.



by: Elizabeth Jones

CLOQUET SESSION, FALL 1990

As summer faded and the birch yellows and maple reds began their silent return to the woods, the aged pines surrounding the Cloquet Forestry Center welcomed yet another group of forestry students. The core of this year's class numbered fifteen: thirteen men and two women. Hardly comparable to classes of years past numbering from sixty to eighty, but nevertheless; the class of '90. Because of our size we would, over the next nine weeks, come to know ourselves and instructors extremely well, while at the same time learning many principles and theories of forest management.

This year's session began with remote sensing and forest inventory class. We spent the first week, among other things, learning the Forestry Center's labyrinth of roads and differentiating the mottled pinks of the aspen from the dark reds of the birch on our aerial photos. The second week of class followed with Dr. Ek and the forest inventory portion. With memories from the St. Paul class still fresh, we exclaimed time and again: "it's downhill from here if we just make it through this week!" However, Dr. Ek arrived with an enthusiasm for teaching forest inventory and by the end of the week we were surprised by how much we had learned in a relatively painless five days.

For the next two weeks we focussed our attentions downwards for the forest soils and forest hydrology classes. As well as learning some terminology used by the "big boys," we saw that soils are the forest's capital, upon which the trees grow as interest. In forest hydrology we were reacquainted with water's intricate role in shaping the forest ecosystem. Many of us will live happily ever after if we never again see a double ring infiltrometer.

Dr. Alm's eagerly awaited field silviculture class followed. Over the next two weeks we examined numerous stands and made silviculture prescriptions involving various schemes to harvest, regenerate, or thin the forest. With the deadline for the oral presentation nearing, we again exclaimed: "If we can just make it through this!" The days for the presentations arrived, and all experienced an ordeal through fire; some fared better than others, but all lived to tell.

Heading into the final third of the session we expanded our study of forest resources to include wildlife and recreation management. With Dr. Jordan we studied deer, moose, ruffed grouse, and other forest residents, while at the same time developing appreciation for the compatibility of wildlife and timber management when properly planned. For Dorothy Anderson and Bill Ganzlin, we developed and presented recreational plans for the Forestry Center, and by doing so, discovered the many obstacles and challenges involved in even the smallest of recreational projects.

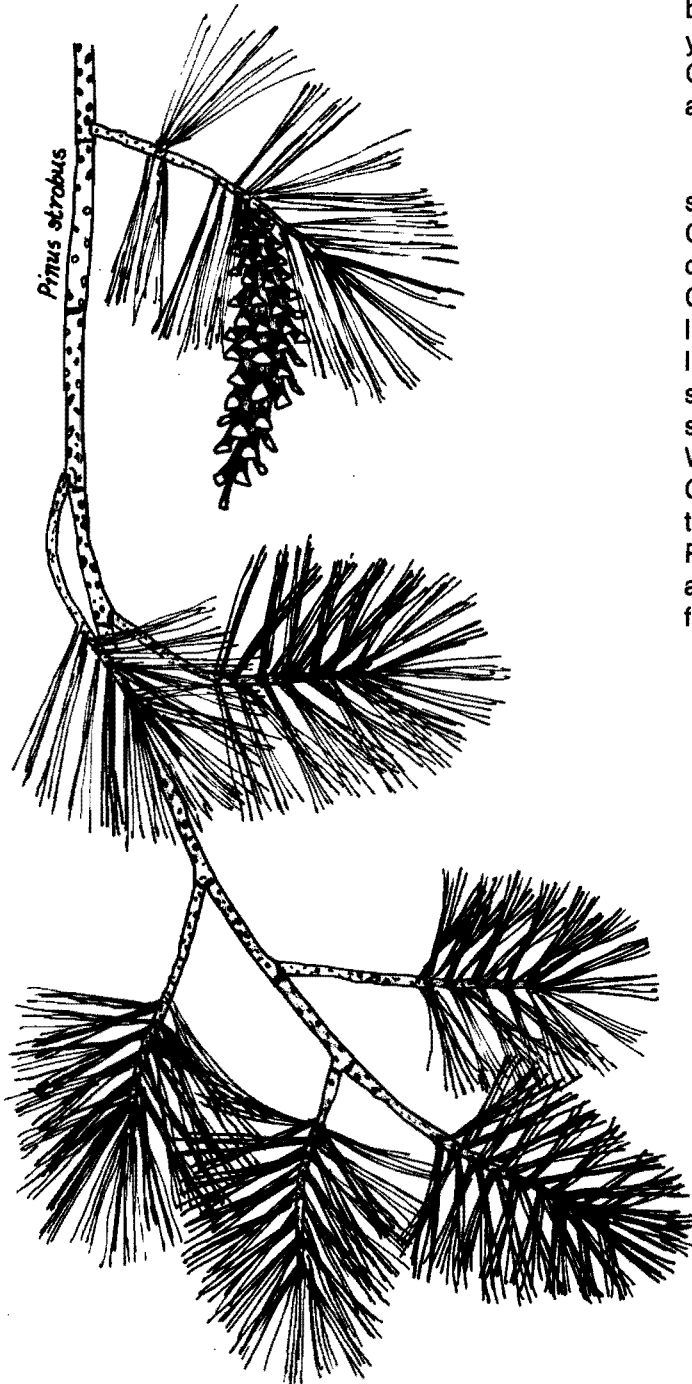
The session ended with Ron Severs' harvesting class. In order to expose us to the various equipment and logging methods common to Minnesota, we kicked off the class with a field trip to some active logging jobs. Besides seeing loggers in action, we spent the entire day actually logging a sale on the south side of the forest. Other activities included lectures on the buying and selling of wood, and some hands-on experience in laying out timber sales.

FIELD SESSIONS

With that, the 1990 Cloquet session was over as suddenly as it had begun. Cold November browns replaced the autumnal yellows and reds, and the pines of Cloquet said goodbye to yet another group of young foresters.

Only when you stop to consider the uniqueness of the Cloquet experience can you fully comprehend its importance. Cloquet isn't about classrooms, lectures, or tests; it's about learning to think. Only after the student achieves this can he or she truly become a forester. When I think back to my time at Cloquet I will always remember the likes of Alan Ek, Al Alm, and Ron Severs, who realized this, and taught what it is to be a forester.

by: Tim Mack



ITASCA SESSION: ONE STUDENT'S PERSPECTIVE

All summer I was looking forward to enjoying Itasca's natural beauty, seeing its wildlife and old growth pines along with bicycling, fishing, canoeing and catching a good display of northern lights. Ah, but reality struck when I picked up the information on book requirements and the dreaded plant list where 120+ Latin names stared back at me! Suddenly the summer seemed to end.

Well, I've never seen 3-1/2 weeks go by so quickly and I can truly say Itasca has been one of the best educational experiences I've had.

Itasca's various habitats surrounding the biological station provide a living laboratory for learning several hands-on field techniques (mistnetting, small mammal trapping, scent-post surveys), conducting research projects, and learning important plants for fish/wildlife.

Important Plants was a new class taught by Phil Splett, and did we have fun!! We were crunching through the woods, "bagging" specimens, and finding original ways to memorize those Latin names! We learned field identification of native plants, required habitats, and their usage for wildlife, which made it a very interesting class.

The two excellent field trips gave us valuable insight to the fish/wildlife field. The Grand Rapids trip informed us on the latest research techniques being used with martins, bears, moose, grouse and wolves.

A great place to do an internship! Thief Lake, a waterfowl paradise, was our second trip. A large shallow-basin lake broken apart by bulrush islands was a sight to see as the white pelicans, canadian geese, and thousands of ducks decended upon the lake. We camped that night near the shore, warmed by the fire, lulled by the migrating birds overhead, and awed by the zillion stars. Management techniques here were based on habitat improvement—planting crops, cut/burning, and shore improvements.

My best memories, however, come from the good times and good friendships I found at Itasca. Who can forget running transects (hey Sara, how many paces?), the wildlife, 80 degree temps., volleyball, beer runs, campfires, Plot 13, botflies (need I say more?), gremlins in the computers, headwaters, and the great fishfry.

Come ready to enjoy and experience, but leave with wonderful memories and warm friendships—that's Itasca!



Cornus canadensis

by: MaryKay Corazalla

OF OWLS, OLD-GROWTH, AND CONTROVERSY

With 140 inches of annual rainfall, Quinault, Washington is more than a wet spot on the Olympic Peninsula. Quinault is in the midst of the Olympic National Forest and in the midst of one of the most widespread and heated controversies involving the Endangered Species Act since it became law in 1973.

The center of the controversy features the northern spotted owl. A denizen of old-growth forests, this medium-sized owl has been used by environmentalists to halt, or at least slow down, the harvesting of old-growth in the Pacific Northwest. At the same time, the spotted owl has become one more factor plaguing the timber industry. Other problems already facing the industry are a declining supply of timber from public lands, log exports overseas, automation, and declining housing markets.



During the spring and summer of 1990 I had the opportunity to work for the U.S. Forest Service in Quinault as a biological technician. My main purpose there was to survey proposed timber sale areas for the presence of spotted owls. Finding and documenting spotted owls and their nesting areas could have a significant impact on the timber sale program of the district.

A person must be able to do three things to find spotted owls—they must sound like an owl, be able to stay up late, and have lots of luck. We drove and hiked roads and trails imitating the characteristic four-note hoot of the spotted owl: "hoo—hoo-hoo—hoooo." If an owl responded at night, we went back during the day and tried to find it again. Assuming it could be relocated, it was necessary to answer certain questions: Did it have a mate? If so, were they nesting? Where was the nest? Did they have young?

To answer most questions, all we needed was a mouse. "Mousing" an owl consisted of placing a live mouse in view of the owl. An easy meal is tough to pass up, and spotted owls are no exception. The owl would swoop down, grab the mouse, and if it had a mate and/or young, would take the mouse to either of them. All we had to do was follow the owl to the nesting or roosting site, which wasn't always easy.

However, finding an owl is easy compared to convincing politicians and others that spotted owls are worth saving. When your only income depends on the trees being harvested, saving an obscure creature of the forest seems absurd. This is definitely a classic conflict between wildlife and the livelihood of a certain segment of society.



The U.S. Fish and Wildlife Service has officially declared the northern spotted owl a threatened species. Now it is up to the federal government to develop a management strategy to balance the need of the owls and the need of the timber industry. More than likely, a compromise will be reached whereby no one will be happy.

by: Ray Rainbolt

CLUBS, ORGANIZATIONS, AND EVENTS
A YEAR WITH THE FORESTRY CLUB

It was the best of times, it was the worst of times... Oh sure, call me on the carpet to think of a worst of times...

Forestry Club memories-TAKE TWO-click!

It was the best of times. A year ago, I became President, but in many ways it seems so much longer than that. The club has accomplished a lot this year even though some skeptics continue to ask, "When are we going to do something?" I began this year by giving a small plug for Forestry Club at the Forest Resources Orientation Class. I said that we were not just the oldest club, but we were also the best. Of course I got some comments about that from the other club's representatives, so maybe I should qualify my statement: "We are the best of the clubs at the College of Natural Resources that have \$5 a year dues, are made up of members from all of the majors in the college, run a Christmas tree lot located at the corner of Larpenteur and Cleveland, have stolen a large rock from an IT club called Plumb Bob, attend a Conclave each year to compete against other schools in traditional logging events, and have a witty and sarcastic female as President." Do I make myself clearer?

This year has been great. Last Spring, we had a very successful tree seedling sale for Arbor Day. Many members got involved with the sale and we had numerous customers due to the increased awareness caused by Earth Day. Janet Larson said, "Demand was high for flowering shrubs. We sold our 750 seedlings quickly and could have sold many more." Club members also spent much of spring Quarter reworking the club's constitution. What fun I had trying to teach Parliamentary Procedure to y'all. "I move that..." It wasn't all that bad, was it?

At the end of spring quarter, I watched many of the core group from last year graduate. I worried about what would happen in the fall and wondered who would get involved. Attending the Itasca session put my worries to rest. I did some recruiting up there and discovered a great group of new people who were willing to get involved.

We began the fall quarter activities by going to Conclave in Alberta, Michigan. You can see Mike Johnson's article for news about that event. Next, we began planning for this year's Christmas tree lot. The tree lot chairs were Todd Anderson and Carla Fussy. We had a setback at the Tree Lot even before we started. In September, there was a fire in the Gibbs schoolhouse that we had used for a sales office. The building had been condemned, and we



Front Row: Jeff Roy, Dennis McDougall, Tony Cheng, Marsha Curtis, Erin Sutter Middle Row: Eric Roers, Todd Anderson, Rick Klevorn, Steve Johnson, Deb Moritz Back Row: Janet Eckhoff, Jeff Knutson, Dawn Olson, Scotty Scholten (Faculty Advisor)

were unable to use it for any purpose. In the end we decided to rent a trailer. The sales went well even though we had almost 600 trees left. Some important people who worked a lot of hours at the tree lot were: Carla Fussy, Todd Anderson, Jeff Roy, Mike Holland, Chad Konickson, Rick Klevorn and our advisor, Scotty Scholten.

Winter Quarter was filled with preparations for Foresters' Day. It was held March 1st and 2nd. On Friday, March 1st, we had the Foresters' Day Banquet. Our keynote speaker this year was Rod Sando, Commissioner of the Minnesota Department of Natural Resources. He asked us all the question, "What do you call a person who is not an environmentalist?" Other speakers were Jack Rajala, President of Rajala Companies (who received this year's Forester of the Year award) and Alan Ek, head of the Forest Resources Department. Dr. Ek introduced Rod Sando. I was the MC for this prestigious event, and I believe it went very well. Some other award winners were Scotty Scholten, Uncle of Paul, and Todd Anderson and Erin Sutter, Son and Daughter of Paul. Many members received scholarships; please refer to the list below.

Saturday was a full day of fun with the Forestry Club. The morning began with breakfast at Manning's cafe and followed with events all day. This year's events were the match split, pulp toss, tobacco spit, and buck saw. Buck saw events were for two women, two men and Jack and Jill teams. Big winners of the day were Mike Johnson, Tony Cheng, Beth Bourn, Todd Anderson, Marsha Curtis, Dawn Olson, Jeff Knutson, Dennis McDougall, Lara Gens and Mark Caspers. After the events and a

written test, Dave Schulz and Erin Sutter were declared Lumber Jack and Jill for Foresters' Day 1991. Saturday Night ended as the Forestry Club danced the night away. There was a good turnout and a good time was had by all. The big surprise of Saturday was when we arrived at school and discovered that the head of our Paul Bunyan statue was missing. We suspected Plumb Bob, the IT group mentioned earlier. I am sure we are going to have some fun getting it back and getting them to find the Blarney Stone.

Spring Quarter will be filled with many events. I have turned over my gavel to a new President, Rick Klevorn, and I am sure that he will keep this club moving. Some events planned are the Arbor Day tree seedling sale, a trip to the Southern Minnesota Forestry Resource Center, and possibly forming a Softball team.

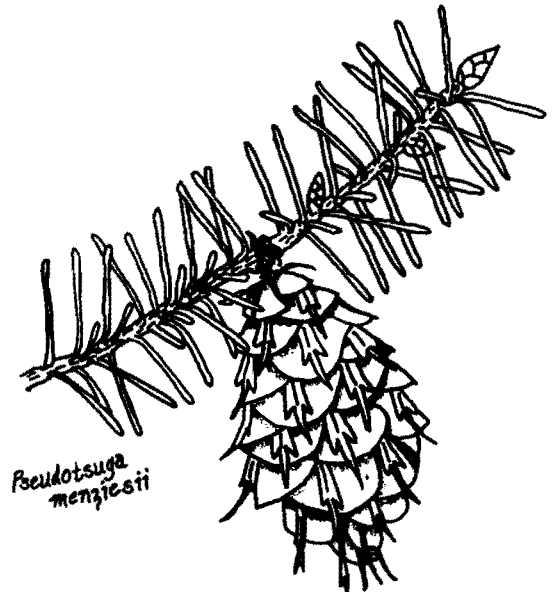
It has been a great year, and I want to thank all the members— especially Todd Anderson. Todd was a great treasurer and his experience as President last year helped me tremendously. I learned a lot this year. I tried to work on delegating to empower every member and make them feel a part of the the Club. I also learned the power of working as a team. Of course, I still did a lot by myself because that is my nature, but I enjoyed most the times when I worked with others. Thank you, and I hope I did a good enough job. It was a lot of fun.

OFFICERS	1990-91	1991-92
President:	Erin Sutter	Rick Klevorn
Vice President:	Dave Schulz	Marsha Curtis
Asst. V.P.:	Dawn Olson	Erin Sutter
Secretary:	Jennifer Walgrave	Dawn Olson
Treasurer:	Todd Anderson	Chad Konickson
Historian:	Marsha Curtis	Jeff Knutson
Sarg.-at-arms:	Jeff Knutson	Carla Fussy

1991 Forestry Club Scholarship Recipients

NAME	YEAR	MAJOR
Jeff Knutson	Senior	FR
Todd Anderson	Senior	FR
Erin Sutter	Junior	RRS
Carla Fussy	Senior	RRM
Dennis McDougall	Junior	FR
Rick Klevorn	Junior	FR
Jeff Roy	Junior	FR
Jennifer Walgrave	Sophomore	FR
Leo Larkin	Junior	FR
Marsha Curtis	Senior	FR
David Haugen	Senior	FR
Mikael Holland	Sophomore	FP
Mandy Sjoquist	Senior	UF
David Schulz	Senior	FR

by: Erin Sutter, President



Snow! It's hard to describe the feelings that I went through upon waking to snow in October. The trip to Alberta, Michigan for the year's Conclave was long and sleep came easily in the van. Traveling for several hours, one loses sense of the weather outside. It was quite a shock to see not just a trace of snow but several inches on the ground. Thankfully, the early van had arrived in time to make it to town to get attire for those who were unprepared—imagine a future forester being unprepared. To the late van's relief, the first item on Friday night's agenda was a bonfire.

After the frantic attempt to fill the team and individual events the night before, Saturday morning came earlier than we wanted. The weather had not improved. In fact, it actually got worse. Drizzle and fog started to turn all the snow and dirt into slush and mud. Yet, foresters march on. The fearless people representing Minnesota at Conclave this year included veterans Dave Haugen, Leo Larkin, Todd Anderson, Mandy Sjoquist, Marsha Curtis, and Barbara Burke. Along with that group came rookies Dawn Olson, Rick Klevorn, Dennis McDougall, Jeff Roy, Jennifer Walgrave, Carla Fussy, Erin Sutter and me, Mike Johnson. Everyone ate breakfast in the cafeteria, and it was on to the events.

The first event was the two-man bucksawing. After minor technical difficulties, our first team was ready. The vets, Leo and Dave, went to work. We all cheered, but soon everyone was busy getting ready for their own events. The morning went quickly with everyone getting involved. Marsha went off in a bus to do the Compass and Pacing Event. Carla was the team cheerleader and participated in the Match Split with Dawn Olson. I put my effort into Jack and Jill Bucksawing with Marsha. Barb was our expert at Wood Identification, and Mandy did well in the Chain Throw. There were so many events that they started to crowd each other and it was impossible to watch everything that was happening. One of the highlights of the day was the pulp toss, in which a four-person team tosses four foot pieces of pulpwood over a distance and tries to land them between two stakes. The ground quickly became muddy due to the melting snow and things got pretty wet. Our four valiant contestants, Todd, Rick, Leo, and Jeff, were soon covered from head to toe in mud and many of the spectators suffered a similar fate. Gradually, as the morning wore on, the weather improved. The sun started shining, and even though it created a bigger mess on the ground, one couldn't help but start to feel better. Lunch was served, and everyone looked forward to the afternoon events.

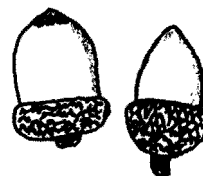
The pace slowed down a little after lunch, and the weather took a downward turn as well. Clouds rolled in and it began to drizzle. What was a messy slush now became puddles. Interest in the events began to diminish as the skies alternated between rain and drizzle. Soon after watching Dennis do the bolt throw and Erin and Jennifer compete in the log roll, we took a short break in the garage where we slept. The short break turned into a long break. Soon many of us decided to skip the final event, to shower, and then go to dinner. The host school, MTU, grilled steaks and set up a very good dinner.

After dinner, everyone assembled in the cafeteria for the awards ceremony. Soon, the small room was filled with cheering and yelling. They went through all of the events, and then moved on to the door prizes. Nearly everyone came away with something. Eventually, with all the prizes awarded, they let us go to prepare for the dance.

The dance was held in another garage and consisted of a disc jockey and light set-up. Beverages were provided and soon the place was rocking. People began dancing and singing. The more enthusiastic ones found the highest vantage points to display their talents (Dave?). Everyone mixed and mingled as they made new friends or renewed past friendships. Late into the night, the party raged on...Did it ever really end?

The next morning, everyone packed up and we were soon back in the vans and headed home. The long trip allowed people to reflect on all that had happened, and soon everyone was making plans for next year. From making improvements in equipment to settling up "practices", the group was looking forward to next year and another chance at bettering our performance. (At least we know we can't do worse.) Looking back at 1990 Conclave, a weekend in Michigan, the fun and new experiences far outweigh the minor difficulties. Though we didn't perform as well as we might have wished, we all had fun and look forward to going back next year and doing even better.

by: Mike Johnson



THE ENVIRONMENTAL STUDIES CLUB

The Environmental Studies Club is a student group that was founded during the winter quarter of 1990. It was during the first Natural Resource and Environmental Studies (NRES) orientation colloquium that a group of people led by Paul Nordin decided to form the first NRES Club. After a series of meetings, the NRES Club was born. The first officers of the club were:

Chris Lord - President
 Ross Toepel - Vice President
 Kelly Anderson - Secretary
 Lisa Kemnitz - Treasurer

During spring quarter of 1990, the club sponsored a number of events. The first event was promotion of local special interest groups, such as the Sierra Club, for Earth Day 1990. The experience was valuable for members of the NRES Club and the community of special interest groups that were sponsored. Alliances were established here that will prove to be important in the future.

The second event that the NRES Club sponsored was a rundown of the environmental issues and how they fared during the 1990 legislative session. Judy Ballairs, a lobbyist for the Sierra Club, and Tom McGuigan, a lobbyist for the National Audobon Society, told how the legislature failed to pass critical wetland legislation and discussed other issues. They also stressed the need for grass-roots-level pressure on our legislators.

During this time the NRES Club decided to change its name to the Environmental Studies Club (ESC). This move was made to include all the people who have studies that enter the environmental disciplines.

Fall quarter of 1990 brought new leadership to the ESC. The officers for the 1990-1991 school year are as follows:

Ross Toepel - President
 Pete Miller - Vice President
 Christine Kinney - Treasurer
 Susan Pederson - Secretary

The goals of this year's officers are to give the ESC a solid foundation from which the club can grow.

The ESC is a proud member of the Student Environmental Summit that was established in the winter quarter of 1991. This Summit has dedicated itself to increasing communication between all environmental groups on the University of Minnesota campus. It also is concerned with the environmental sustainability of the U of MN and is making known its feelings to the University administration.

by: Ross Toepel, President





Fisheries and Wildlife Club Members

A YEAR IN THE LIFE OF THE FISHERIES AND WILDLIFE CLUB

Hello Gopher Peavey readers, and welcome to A Year In the Life of the Fisheries and Wildlife Club. My name is William and I will be guiding you on your tour. If you look to your left, you will see one of the more controversial things the club has done this year. Early fall quarter the club decided to change their logo. Although the old design was popular, people were tired of it, and apparel items such as t-shirts and sweatshirts were no longer selling with the vigor they once had. A contest was held and a new design was chosen. It was a much more modern, computer generated design. Although there were still those that were against changing the logo, the new design was implemented and shirt sales increased as expected.

Up ahead to your right, you will see some of the other activities the club took part in Fall quarter. During deer season, some of the members took an active part in the Hennipen Parks deer hunt. As hunters brought their kills in to be registered, members would weigh the deer, plot the kill sight on a map, and debrief hunters on how their day went. This information was all compiled to give the park managers a better idea of what and how the deer populations are doing. Club members also took part in the Midwest Fisheries and Wildlife Conference which ran from December 2nd through December 5th. Most members donated their time in setting up projectors and hosting information booths. However, one member, Will Pitt, presented a paper on the work he has been doing on his UROP project. A few brave/foolish

members even endeavored to go winter camping in George H. Cosby Manitou State Park. The last thing the club participated in fall quarter was the Audobon Christmas Bird Count which was held December 15th.

Now if you'll follow me to the Aldo Leopold Room, you will see that winter quarter the club managed to put together a fair to poor bowling team. They also managed to gather up enough willing fodder to make a broomball

team. What a choice-frostbite on the broomball arena or humiliation in the bowling hall. To fulfill the academic requirements for winter quarter, the club took an active part in Wildlife Week at the St. Paul Student Center. Wildlife Week takes place every year in the last week of February and/or the first week in March. This year, as always, club members hosted film presentations, introduced speakers, and put on the 2nd Annual Wildlife Calling Contest, where people test their skills at producing comprehensible wildlife sounds. This event is a favorite with the crowds. Now if you will please follow me to the east wing we will examine the club's activities spring quarter.

On your right, you will see that during Spring quarter the club was perhaps feeling a little guilty about all the fun they had all winter and now decided to do some real work. The club built loon nesting platforms in Chippewa National Forest and also spent some time trying to perfect their techniques for building fish cribs. These cribs are built out of old logs, chicken wire and branches. It is intended to create habitat for certain species of fish. The cribs are placed out on the ice before melting and then fall into the water during the spring thaw. In the past, when the club built the cribs, they would either drift out to the middle of the lake and sink, break apart and become a boating hazard, or end up sitting on solid ground when the runoff dried out the area they were placed in. This year the project went a bit better, although all the results aren't in yet.

Over here to your left we have the club's, E.E.O.P. presentation. The Environmental Education Outreach Program enjoyed measured success this year. With this program, club members go to area schools and give presentations on a number of Fisheries and Wildlife topics. The kids love it, and it gives the club some much needed exposure. Finally, up ahead you can see a list of all the people who have donated time giving presentations to the club on the work they have been doing. The list includes: Brian Farm, Paul Hensen, Will Pitt, Luke Skinner, and many, many more.

This concludes our tour of A Year in the Life of the Fisheries and Wildlife Club. Please feel free to visit our gift shop where you will find the Fisheries and Wildlife club t-shirts and sweatshirts. My name again is William, and on behalf of the club I would like to say thank you for coming, and have a good day.

by: Christopher Goodwin, Secretary



Fisheries and Wildlife Club Officers:

Top: Kathy Beaulieu, Don Peterson

Bottom: Dean Paron, Lyle Buss, Chris Goodwin



RECREATION RESOURCE MANAGEMENT CLUB

The Recreation Resource Managers (RRM) club was formed in 1972 with the purpose of serving students in the Recreation Resource Management Program. Our goals are to broaden education, give practical experience in leadership, provide a professional setting for members, and maybe have a little fun along the way.

In 1990 we accomplished these objectives by:

1. Speaking with RRM graduates about their professional experiences since leaving the University of Minnesota.
2. Holding a series of fund raisers to support our activities. These fund raisers are always a wonderful exercise in planning (not to mention stress management).
3. Speaking with managers of regional facilities about unique management concerns.
4. Working with other student organizations.

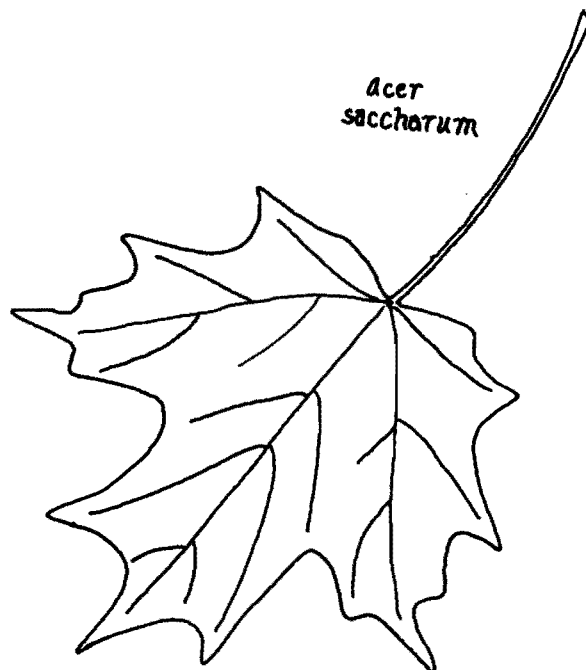
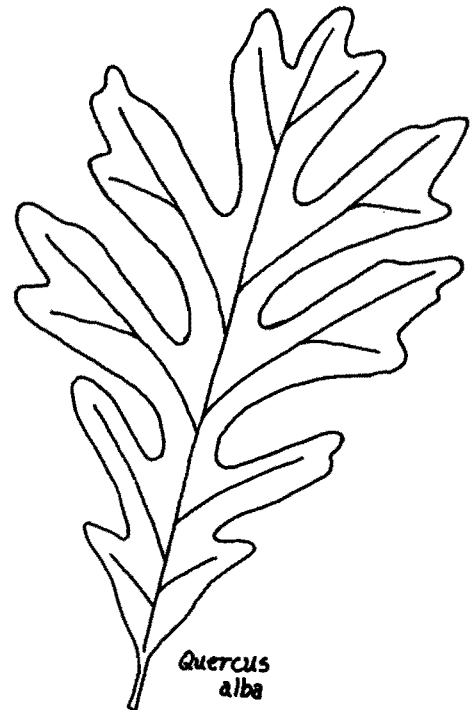
We look forward to a productive 1991. A number of trips to state parks are planned for the spring along with more social functions. We will continue to promote the wise use of our natural resources for recreation now and for the future. Finally, we would like to extend a special thanks to our faculty advisor, Dr. Dorothy Anderson, for always having an open door.

President: Brad Sinn

Secretary/Treasurer: Dean Lundblad

Faculty Advisor: Dr. Dorothy Anderson

by: Brad Sinn, President



PIMA - TAPPI, STUDENT CHAPTER

The University of Minnesota PIMA and TAPPI student chapter has increased its membership by 50% and is now at 52 members. The Paper Science and Engineering student organization planned and participated in more activities in the 1990-91 school year than in any previous year.

The goals accomplished by the PIMA - TAPPI student chapter include:

1. Disseminating managerial and technical information pertaining to the paper industry.
2. Providing opportunities for professional development.
3. Promoting interaction between student and industry professionals.
4. Creating an environment for students to get to know each other better.

The major activities of the University of Minnesota PIMA - TAPPI student chapter included:

1. The annual fall student chapter meeting. The purpose of the meeting was to introduce new students, faculty, and student chapter officials. Student chapter registration and trade journal orders were accomplished.
2. A student chapter sponsored managerial and technical seminar series presented by industry professionals on current issues relating to the pulp and paper industry.
3. Pulp and paper mill tours at Champion in Sartell, Pope and Talbot in Eau Claire, and Blandin in Grand Rapids.
4. A fundraising project involving t-shirt, sweat-shirt, and coffee cup sales with the U of M Paper Science and Engineering Logo.
5. Conferences and seminars sponsored by national and local sections of PIMA and TAPPI were attended dealing with blade coating, base stock coating manufacture & technology, secondary fiber utilization, and mechanical pulping.
6. Social events included the annual Paper Science and Engineering Banquet, golf and volleyball tournament, and spring bash.

7. Student chapter sponsored company presentations the evening before the student interviews.

8. A pulp and paper presentation given by chapter members to visiting high school members of Future Farmers of America.

9. A student chapter newsletter was published which included articles written by a member from each class (freshman, sophomore, junior, and senior) regarding chapter activities, summer job profiles, faculty interviews, and paper-related topics.

10. Developing files on paper companies. A team of three members within different class ranking will choose a company they would like to cover. The teams accumulated information on that company from sources, such as trade journals. The objective here was four fold:

- a). To get the students to read the trade journals.
- b). To put together a paper company file which would be accessible to all members.
- c). To develop closer relations between class ranks.
- d). To increase freshman and sophomore involvement.

by: Robert Cibuzar, President



Gibbs Schoolhouse

CHRISTMAS TREE SALES; RESPECT FOR THE LITTLE GIBBS SCHOOL HOUSE

When Christmas time comes each year, where do many St. Paul people buy their Christmas trees? It is likely they buy them where they have been buying them since 1961. In 1961, the Forestry club began selling trees at the Gibbs schoolhouse. The school house is located at the intersection of Cleveland Avenue and Larpenteur Avenue in Falcon Heights. Each year the Christmas tree sales begin the day after Thanksgiving and continue through Christmas day. Christmas wreaths have been sold more recently. The wreaths were made by Carl Vogt.

Scotch pine, white pine, balsam fir, red pine, and frazer fir are common Christmas trees the tree lot supplies. Carl Vogt, forester and CNR instructor, supplied the lot with forty or so spruce. This is more than last year. The needles fall off quickly, so few have been sold in the past. This year Tom Wolcyn from Cambridge sold three thousand trees to the forestry club. By Christmas, two thousand four hundred trees were sold.

This year tradition changed a little. The little old schoolhouse, that the Ramsey County Historical Society is trying to preserve, became a victim of arson. The school house burned on the last weekend of September. Pruners, saws, boards, aprons, and a heater were lost in the fire. Many customers returning to the tree lot remember going into the little old school house to buy trees.

trailer rented by the Forestry club. Tamera Truir, a Ramsey County Historical Society appraiser, has appraised the cost of repair to the schoolhouse to be roughly fifteen thousand dollars. Rebuilding will likely prove too expensive for the University. Repair has become an option. The Forestry club and customers hope the tradition can carry on in the little old school house. The University budget committee is reviewing the issue now, but no decision has been reached. A special thanks given to all those who signed the Gibbs school house petition.

The Fish and Wildlife club has been assisting with tree sales for a number of years and has recently begun selling items. Bird houses, duck houses, and bat houses have been sold in the 1990-91 year. Many people from various clubs help sell trees to earn a tree for themselves or to earn some cash for their help. Roughly thirty employees assisted with the tree sales. Dave Anderson, the Christmas tree sales coordinator, was quite pleased with the help and the success of the tree lot.

by: Donald Peterson



Customers now paid for the trees in a little

THE STUDENT/FACULTY BOARD

"What is the Student/Faculty Board anyway?" This year, I heard this question too many times. The constitution states that the Student/Faculty Board was created to establish and maintain open and meaningful communication among the faculty, student body and administration of the College of Natural Resources. Its responsibility is to consider problems and to make recommendations to the Dean concerning their resolution. Basically, we get together, talk, and try to do things to better the college and its community. The members of the board include the presidents of all the CNR clubs and their advisors, a representative from each class (freshman, sophomore, etc.) elected in the spring, the CNR student senator, the Dean, and the Assistant Dean. The students are the only voting members of the Board. This year's members are as follows:

Officers:

John Bell	Assistant Dean and Faculty Co-Chair
Erin Sutter	Student Co-Chair, Senator, and Jr. Class Rep.
Brian Collins	Secretary and Gopher Peavey Representative
Patrick Galdonik	Treasurer and Sr. Class Rep.

Members:

Gary Heaser	Soph. Class Rep.
Daniel Schultz	Fr. Class Rep.
Kathy Beaulie	Fisheries & Wildlife Club President
Dr. David Smith	Fisheries & Wildlife Club Advisor
Erin Sutter	Forestry Club President
Dr. Harold Scholten	Forestry Club Advisor
Lance Wasniewski	Forest Products Research Society President
Pr. Harlan Petersen	Forest Products Research Society Advisor
Ross Toepel	Environmental Studies Club President
Dr. Alan Ek	Environmental Studies Club Advisor
Brad Sinn	Recreation Resource Management President
Dr. Dorothy Anderson	Recreation Resource Management Advisor
Dawn Kreft	Xi Sigma Pi Forester
Dr. Glen Furnier	Xi Sigma Pi Advisor
Dave Schulz	Society of American Foresters SC President
Phil Splett	Society of American Foresters SC Advisor
Rob Cibuzar	President, Tech. Association of Pulp and Paper Industry (TAPPI) & Paper Industry

CLUBS, ORGANIZATIONS, AND EVENTS

Mang. Association (PIMA)

TAPPI and PIMA Advisor

Ex-Officio Member

Dr. Robert Rouda
Dean Skok

This year started off slowly, but by the end of fall quarter, we had elected new officers and gone into debt. The Student/Faculty Board is funded by Student Service Fees. In the past, the board has used the money to sponsor events and to send students to conferences. This year, we helped sponsor the Fall Bonfire organized by the Forest Products Research Society Student Chapter. Other accomplishments of the Board include the approval of the Xi Sigma Pi bookboard located in the NRAB student lounge and the request for a grant from the Offices of the Vice Presidents for Student Affairs and External Relations. If granted, the money will be used in part to improve CNR facilities for commuter students. One project includes the development of a student survival handbook that will help provide better information about University services and other tips about surviving at the "U".

This is my third year on the Student/Faculty Board and I believe that it has a lot of potential. It can be frustrating, but at least our meetings aren't at 7:15 in the morning anymore. I know there is hope for the board in just that fact alone. I encourage students to get involved with the board. Anyone can attend the meetings which are informal with only a little bit of Parliamentary Procedure every once in a while. Meetings are a place for the clubs to communicate, keep others up to date on their events, and for students and faculty to voice their concerns. The board can be whatever the members want it to be.

by: Erin Kathleen Sutter, Chair



SAINT PAUL BOARD OF GOVERNORS

This was an excellent year for the St. Paul Student Center Board of Governors. It began with nearly half the students and almost all of the faculty returning.

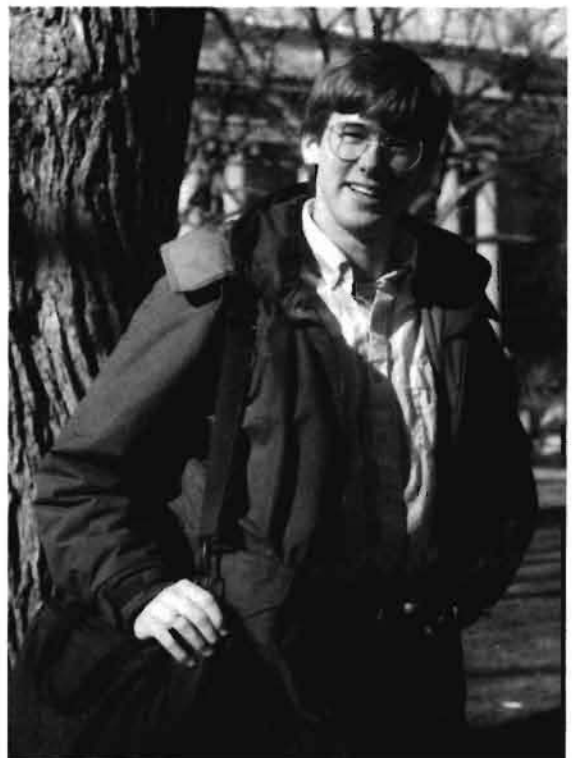
The purpose of the Board of Governors (BOG) is to set policy, obtain and distribute funding, and to learn skills valuable in leadership. The members of the BOG consist of faculty and student representatives from the five colleges on this campus, two graduate school representatives, one alumni, one representative from S.O.D.C., and one representative from the Board of Colleges. Your two representatives from CNR for this year are myself and Rick Fern from Forest Products.

There are several highlights within the BOG and throughout the Student Center that are of interest to our college. For leadership opportunities there was a fellowship retreat held at Camp St. Croix for BOG members, staff, and student volunteers. Other leadership programs vary from informal scenarios reflecting current policy, to planning the spring recognition and awarding the Bob Monica Scholarship for volunteer leadership. Another highlight is the annual co-sponsorship of the Wildlife Club's Wildlife Week celebration. Other items such as room use reallocation, and student service fee requests continue from year to year.

One new opportunity that has been started by the BOG is the formation of two add-hoc committees to look into short range and long range space allocation within the Student Center. If anyone has any ideas (especially in the long range) that they want to be made known, I believe that you can become a part of this committee. If interested, leave a note in my or Rick Fern's P.O. box.

One final note: the St. Paul Student Center is always looking for volunteers in areas ranging from the Board of Governors to the Center for Outdoor Activities. I know that there will be at least one BOG position open for a CNR student representative. This is an excellent way to gain valuable skills and to make a difference within our campus.

by: Michael Hass, CNR Representative



Mike Hass

WHO SAYS STUDENT ACTIVISM IS DEAD?

The first Student Environmental Summit proved students care about environmental issues and are optimistic that they can make a difference. Held in February on the St. Paul campus, the summit brought together about 50 students from different environmental groups, as well as Faculty and Staff, to discuss the environmental policies of the University and the state of Minnesota. John Bell, Assistant Dean of the College of Natural Resources, was one of several faculty present.

Students recognize that the University is more than just a microcosm of the state; what happens at our campuses is of concern to all state residents. Whether one is a farmer, businessman, educator or student, we all feel pride in our University's accomplishments through research and education. The University is often acknowledged as the "think tank" of the state, and it is in keeping with this tradition that students met to discuss the important environmental decisions confronting the University and the state as a whole.

Following an opening address by Rhetoric Professor Warren Gore that focused on skills building, participant's broke into workshops on topics such as resource management, sustainable agriculture, energy policy, and waste management. Facilitators of the workshops directed the discussions toward specific environmental policy concerns and how the student groups working collectively can move the University toward a more environmentally sensitive position.

Some examples of environmentally sensitive University policy were cited as noteworthy, including the University Building Energy Efficiency Project. However, the consensus was that the University could be doing more. Not content with a passive role for the University, students envisioned how we might provide a test-case of progressive environmental leadership in the state.

The University's environmental commitment is perhaps strongest in the area of curriculum. New courses and a new major are being offered. Continuing Education and Extension offers a course called "Garbage, Government, and the Globe" which takes an inter-disciplinary approach to the garbage crisis. The new major, Natural Resources and Environmental Studies, is offered by the College of Natural Resources and provides an opportunity for students to study environmental concerns as they pertain to land and resource use. Summit participants discussed the value of requiring some environmental course work of all University students.

The Student Environmental Summit participants agreed to meet again in the future to plan events for Earth Day. The February summit was successful in it's primary goal to establish a dialogue between different student environmental groups and was the first step in an on-going effort of inter-group cooperation. So far, the students have met three times.

by: Niko Grant

INTRODUCING THE 1990
DAYTON KIRKHAM
SCHOLARSHIP RECIPIENTS



Joelle Boeck

Natural Resources and Enviromental
Studies

Forest Lake High School
Scandia, Minn.



Amanda Geist

Natural Resources and Enviromental
Studies

Hopkins High School
Minnetonka, Minn.



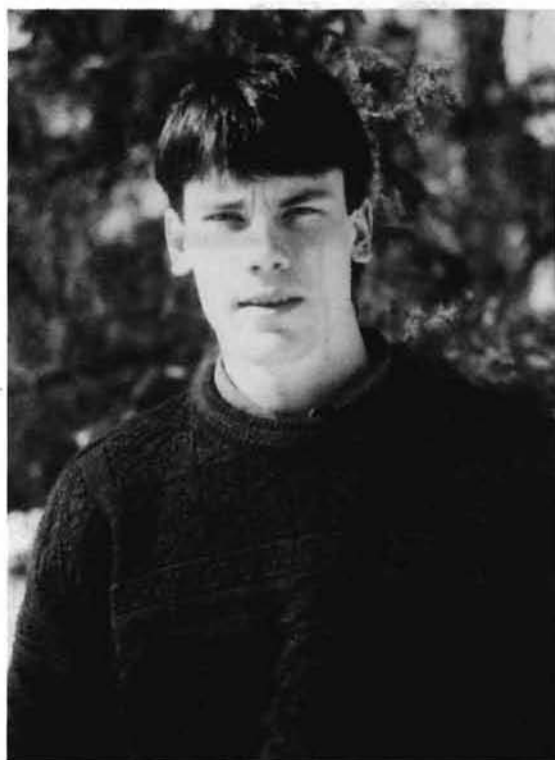
Todd Klapperich

Recreation Resource Management

Osseo High School
Maple Grove, Minn.



Deanna Peterson
Fisheries and Wildlife
Anoka Ramsey Community College
Roseville, Minn.



Eric Spadgenske
Fisheries and Wildlife
Anoka Ramsey Community College
Roseville, Minn.

KIRKHAM SCHOLARS NOT PICTURED

Lori Allison
Undecided
Rosemount High School
Rosemount, Minn.

Anthony Dodge
Fisheries and Wildlife
Washburn High School
Minneapolis, Minn.

Adam Mednick
Natural Resources and Environmental Studies
Highland Park High School
Highland Park, Ill.



1990-1991 Scholarship Winners

JOHN H. ALLISON SCHOLARSHIP

Richard Dunkley

ANDERSEN CORPORATION SCHOLARSHIP

Brian Lochner

Teresa Paszek

Lan Vu

**ROBERT C. BERNARD MEMORIAL
SCHOLARSHIP**

Sarah Johanson

BLANDIN PAPER COMPANY SCHOLARSHIP

Tomas Edgren

R.M. BROWN SCHOLARSHIP

Daniel Rose

CAROLIND SCHOLARSHIP

Todd Klapperich

Michael Smith

Aaron Wunrow

CALEB DORR SCHOLARSHIP

John Kroll

Christine Silker

Craig Sorley

**EDWARD A. EVERETT MEMORIAL
SCHOLARSHIP**

Sarah Clarkin
Jeff Korte
Vicki Walcott

**FEDERATED GARDEN CLUBS OF MINNESOTA
SCHOLARSHIPS, LOCAL AWARDS**

Anthony Brough
Lyle Buss
Brian Lochner
Bryan Malone
Chris Miller
Steven Steiner
Erin Sutter

**FEDERATED GARDEN CLUB SCHOLARSHIP
NATIONAL AWARD**

Christopher Lord

**FRATERNAL ORDER OF THE FOREST
PRODUCTS INDUSTRY**

Tom MacDonald
Mark Weegman

**ROBERT L. GOUDY MEMORIAL
SCHOLARSHIP**

Chad Konnickson
Bryan Malone

SAMUEL B. GREEN SCHOLARSHIP MEDAL

Lyle Buss

**TIMOTHY B. KNOPP MEMORIAL
SCHOLARSHIP**

Aaron Wunrow

RALPH L. LINDGREEN SCHOLARSHIP

Chris Lintula

OSCAR L. MATHER SCHOLARSHIP

Tony Brough

KEN MERRIAM SCHOLARSHIP

Paul Franklin

WILLIAM R. MILES SCHOLARSHIP

Dennis McDougal

Anthony Miller

**MINNESOTA FORESTRY ASSOCIATION
SCHOLARSHIP**

Becky Lein

David Schulz

**C.J. MULROONEY ENDOWED
MEMORIAL SCHOLARSHIP**

John Lowder

HENRY J. SCHMITZ SCHOLARSHIP

Katherine Beaulieu

Robert Cibuzar

William Pitt

Erin Sutter

AUGUSTUS L. SEARLES SCHOLARSHIP

Elizabeth Bourn
Elizabeth Jones
Christine Silker

J. DONALD SMITH AWARD

Margaret Robertsen

K. E. WINSNESS SCHOLARSHIP

Jason Brown

HELEN A. YOUNG MEMORIAL SCHOLARSHIP

Leo Larkin

**1990-1991 PAPER SCIENCE AND
ENGINEERING SCHOLARSHIPS**

The Paper Science and Engineering Scholarships were made possible this year by the following companies and organizations:

Appleton Papers Inc
American Cyanamid
BE&K Inc.
Betz Laboratories Inc.
Blandin Paper Company
Boise Cascade Corporation
Buckman Laboratories Inc.
Champion International Corporation
Consolidated Papers Inc.
H.B. Fuller Company
Henkel Chemical Company
Lake Superior Paper Industries
Minnesota Chemical Company
Minnesota Section of TAPPI
Nalco Chemical Company
Nekoosa Packaging/Georgia Pacific-
Packaging Corp. of America
North Central Division of PIMA
Potlatch Corporation
PS&E Council Scholarship
Texo Corporation
Waldorf Corporation
Alumni and Personal Contributions

**1990 Paper Science and Engineering
Recipients**

Seniors:

Thomas Berg
Thomas Edgren
Steven Koepke
John Kroll
John Metza

Juniors:

Dennis Blake
Rick Fern
Timothy Hockin
John Holahan
Mary Skorupa

Sophomore:

Steven Steiner

Freshmen:

Kimberly Englund
J. Ben Hohman
Sean Karls
Michael Lee
Zane Nevala
Daniel Schultz

Gopher Peavey
Yearbook Staff
1991



1991 GOPHER PEAVEY STAFF

Staff Advisor and Manger

Janet Larson

Editors

Janet Larson

Bruce (alias Eddy) Larson

Design, Layout, and Typesetting

Ben Hohman

Jon Noeldner

Staff Photographer

Brian Collins

Illustrations

Janet Larson

Behind the Scenes

Christopher Goodwin

Brenda Jones

Heather Peterson

Elizabeth Jones

Donald Peterson

Samuel Surges

Reporters

Mary Kay Corazalla

Christopher Goodwin

Michael Johnson

Timothy Mack

Donald Peterson

S. Brad Sinn

Ross Toepel

Robert Cibuzar

Niko Grant

Jeff Korte

Ann Mayhew

Raymond Rainbolt

Erin Sutter

Mallory Wingrove

Niko Grant is a senior in the College of Biological Sciences in environmental policy and law. Niko has written for the Minnesota Daily as well.

Jeff Korte, author of "Superior Equinox", is the 1991 winner of the Charles Lathrop Pack Essay Writing Contest. Jeff is a senior in the natural resources and environmental studies program. Congratulations Jeff!

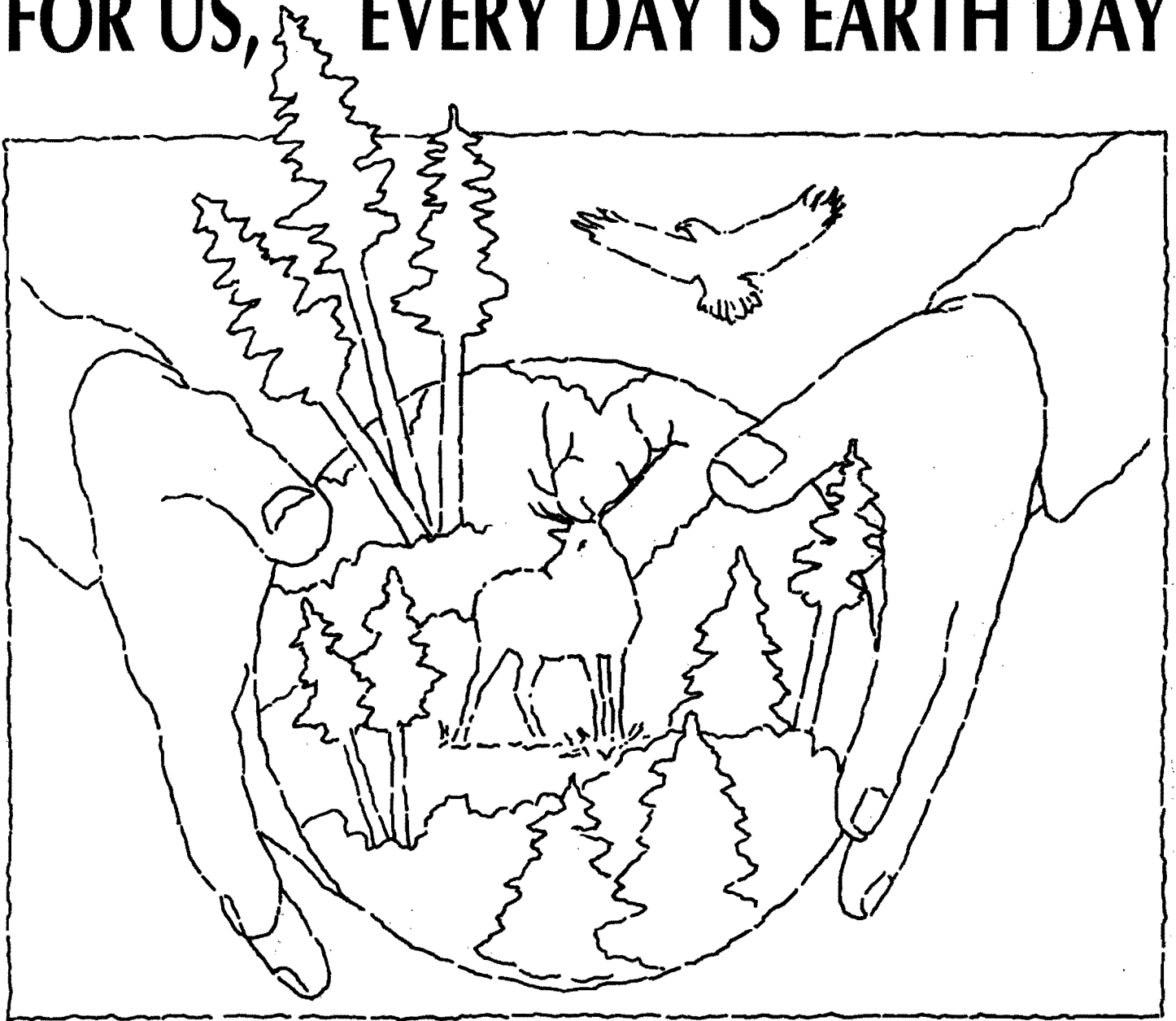
Mallory Wingrove joined the Office for Student Affairs as a student secretarial assistant in August, 1990. She, took a very strong interest in the Gopher Peavey, and put a great deal of time into the "spotlight" articles. Mallory graduated from the Carlson School of Management in December, 1990, and left the University in January. In only a few months, Mallory has left her mark on this book, and we owe her a debt of gratitude. Thank you Mallory for all your hard work and dedication. Best wishes to you from this year's Gopher Peavey editors and staff. You are missed.

This document was designed using Aldus Pagemaker 4.0., however the layout was created in the minds of a slim two. It would please Jon, Janet, Brian, and Ben who gave up evenings, classes, their social life, and a few sacred weekends to finish this monster, to tell you that it was indeed worth it. Once they completed the Gopher Peavey, a great burden was lifted and they seemed to walk about one foot off the ground. They thank all the people above, those in the Office for Student Affairs, and the countless people who put up with them.

Gopher Peavey 1991 Advertisements



SOCIETY OF AMERICAN FORESTERS FOR US, EVERY DAY IS EARTH DAY



**For more information on
joining this organization
that represents the
forestry profession in the
United States, contact:**



Marty Christensen, Membership Chair;
Minnesota Society of American Foresters;
Box 308; Deer River, Minnesota 56636;
(218) 246-2123
or
Society of American Foresters;
5400 Grosvenor Lane;
Bethesda, Maryland 20814-2198;
(301) 897-8720

Forest products are a way of life . . .

. . .in northern Minnesota. And, Potlatch cares about our forests. They supply the raw materials we need to make oriented strand-board and premium coated papers. They also provide habitat for wildlife and recreational opportunities for all of us.

At Potlatch, we take care of the forests. Since 1970, we've planted more than 27 million seedlings. That's more than six trees for every resident in Minnesota. We carefully manage our 312,000 acres of forest land in northern Minnesota for multiple use—wildlife habitat, recreation and, of course, for timber needed to make our products. And Potlatch forests are open to the public for recreational pursuits.

Potlatch — committed to practicing sound forest management, protecting the environment and providing jobs for Minnesotans.

Potlatch

Northwest Paper Division
Minnesota Wood Products Division

Cloquet □ Brainerd □ Grand Rapids □ Bemidji □ Cook



Northern Michigan Veneers, Inc.
Wisconsin Veneer and Plywood, Inc.
Butternut Veneers, Inc.
Besse Forest Products, Inc.
Birds Eye Veneer Company

Manufacturers of Quality Veneer, Plywood and Lumber

BUYING:

- ✓ Veneer Logs
- ✓ Saw Logs
- ✓ All Hardwood Species
- ✓ 8, 10, 12, 14, 16 Foot Lengths
- ✓ Also Standing Timber & Timberlands

Log Buyer-Dana Gustke

Phone-715-489-3611

FAX-715-489-3268

MANUFACTURING FACILITIES: Butternut, Wisconsin
Mattoon, Wisconsin
Gladstone, Michigan

Growing for Your Future.



At Blandin Paper, we're concerned about the future. That's why we're committed to the effective management of our forests — and we encourage you to do the same.

Striving for goals.
Meeting new challenges.
Progress takes planning
and wise use of our re-
sources. Together, we're
growing for your future.



BLANDIN PAPER
Grand Rapids, Minnesota

We're proud to be at the top of the nation

The history of International Falls and of its wood products industry are closely linked. The pioneers who strived to build a city on the Canadian border were also the founders of the paper industry. They understood that the city's prospects for progress and the mill's growth and prosperity would often be intertwined in the coming years.

International Falls has come a long way in only 80 years of existence, and we're proud to be here. Our employees, many of them sons and daughters of early paper mill workers, have decades of experience in the craft of pulp and paper-making.

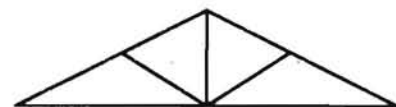
Producing fine paper products at the nation's northern border, we're the people of Boise Cascade.

**Boise Cascade
White Paper Division**



Villaume Industries INC.

2926 Long Oak Circle
St. Paul, MN 55121
612-454-3610

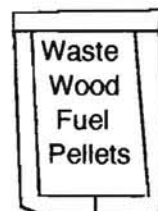


"Roof trusses and
industrial
wood products"

Valley Forest Resources INC.

Star Route 27
Marcell, MN 56657
218-832-3600

"dealing with aspen
cut stock waste
wood fuel pellets"



Let your ad work for you
in the
Gopher Peavey!

the spot
seen 'round
the world



NEL-SPOT

WORLD LEADER IN
FORESTRY MARKING PAINTS
AND MARKING EQUIPMENT

NELSON PAINT COMPANY

Three plants: Iron Mountain, Michigan
Montgomery, Alabama
McMinnville, Oregon



Rajala Companies

Deer River, Minn. 56636

(218) 246-8277

Big Fork, Minn. 56628

(218) 743-3333

Better Forests for a Better Tomorrow

**SINCE 1912
WE'VE BEEN TAKING
THE GUESSWORK
OUT OF HOME BUILDING**



**Come in and let our
experts help you with
any building need!**

C.H. Carpenter
LUMBER

9421 LYNDALE AVE. SO.
BLOOMINGTON
581-8459

502 WEST 1ST ST.
SHAKOPEE
445-3199

18450 ANNA TRAIL SE
PRIOR LAKE
447-4930

HIGHWAY 5
VICTORIA
445-7681



**Center for
Outdoor Adventures**

- Resource Center
- Extended Trips
- Armchair Programs
- Mini-Courses

St. Paul Student Center

625-0251

Hennepin Paper Company

100 S.W. 5th Avenue
Little Falls, MN 56345
(612) 632-3684